

HYDRAULIC FRACTURING ON PUBLIC LANDS FORUM

TRANSCRIPT OF
PUBLIC FORUM

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Belle Mehus Auditorium
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(Hosted by the Bureau of Land Management)

A P P E A R A N C E S

MR. RICH WARD, Moderator/Facilitator

PANELISTS:

MR. DON JUDICE, Bureau of Land Management
MR. MIKE WORDEN, Bureau of Land Management
MR. JOHN PANEITZ, Whiting Petroleum Corporation
MR. MIKE EBERHARD, Halliburton Energy Services
MR. FRED FOX, MHA Nation/FBIR
MR. MYRON HANSON, Northwest Landowners
Association
MR. LYNN HELMS, North Dakota Oil & Gas
Commission
MR. DENNIS FEWLESS, North Dakota Department of
Health
MR. DONALD NELSON, Dakota Resource Council

MR. LONNY BAGLEY, Bureau of Land Management

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1 (The following proceedings were had and
2 made of record herein, commencing at 4:05 p.m.,
3 Wednesday, the 20th day of April, 2011:)

4 MR. WARD: Hello. Hello. Hello, and
5 welcome. Please move forward and have a seat.

6 I'd like to open this important forum by
7 introducing to you Theresa Hanley, the Deputy State
8 Director of the Montana and Dakotas for the BLM.
9 Theresa.

10 MS. HANLEY: Good afternoon, everybody. I
11 want to thank you all so very much for coming and
12 joining us this afternoon and taking some time out
13 of your day to attend this forum. On behalf of our
14 state director, Jamie Connell, it's my pleasure to
15 welcome you to participate today. We're very much
16 looking forward to hearing your comments on a very
17 important topic of hydraulic fracturing.

18 Oil and gas natural resources are, of
19 course, a very important part of our energy
20 portfolio now and they will be for many years to
21 come. We recognize that we need to develop these
22 resources responsibly to reduce our dependence on
23 foreign oil. We need to develop them thoughtfully
24 and in a balanced way that allows us to protect our
25 landscapes and our resources for future

1 generations.

2 The growth of our domestic supply of oil
3 and gas has been made possible in part by
4 technological innovations and advances by industry.
5 One of those advances is hydraulic fracturing.
6 This is a common technique used by industry to
7 increase a well's ability to produce oil or gas in
8 commercial quantities.

9 Right now we estimate that about
10 90 percent of the wells that are drilled on federal
11 lands utilize this technique of hydraulic
12 fracturing. The number of wells that are using
13 this technique has grown steadily over the years as
14 oil and gas producers are drilling in geologic
15 formations that are less permeable than those that
16 have been drilled in the past.

17 As the use of hydraulic fracturing has
18 increased, it's become a topic of interest
19 throughout the country, both with respect to
20 operations that are happening on public lands, as
21 well as private lands.

22 Some of the broad issues and concerns that
23 we have heard include potential contamination and
24 availability of drinking water supplies, the
25 compromise of trade secrets stemming from

1 disclosure of chemicals that are used in the
2 hydraulic fracturing process and concerns about the
3 potential economic impacts of additional
4 regulations on hydraulic fracturing methods and
5 fluids.

6 We take these issues and concerns very
7 seriously, and that's why the Bureau of Land
8 Management is holding these forums. Through these
9 meetings we hope that we will learn a better way
10 to -- a path forward by listening to you all and
11 your concerns. We want to be sure that we are
12 utilizing our resources in a way that is smart from
13 the start.

14 So the purpose of our meeting today is to
15 hear and record your comments on hydraulic
16 fracturing. All are welcome to speak or to submit
17 written comments. We're very much looking forward
18 to hearing your views on this topic. We're also
19 looking forward to continuing to work with other
20 agencies and our industry partners and others to
21 ensure that hydraulic fracturing, as well as other
22 technologies, are used in as clean, a safe -- and
23 safe a manner as possible, and part of that is
24 listening to the concerns and comments of you all.

25 So, again, thank you so much for

1 participating today. We really appreciate it.

2 Our session moderator today is Mr. Rich
3 Ward.

4 (Applause.)

5 MR. WARD: So a fantastic opportunity to
6 let your voice be heard in our public discourse.
7 Terrific. Thank you, Theresa.

8 I'm going to go through the housekeeping.
9 I've been asked to facilitate and moderate this
10 session. I'm not with the BLM. I'm with the Aspen
11 Science Center. And the aim today is to have a
12 very rational, scientifically based conversation
13 about this potentially fabulous resource which
14 might bring also with it certain risks. And the
15 Aspen Science Center is dedicated to rational
16 debate.

17 What brings me to this conversation and
18 what gives me credibility to stand at the podium is
19 that I've been in the industry for about 25 years
20 as -- on the sustainability side. I actually
21 started in the industry as an exploration geologist
22 with Sohio, having graduated as a petroleum
23 geologist from Stanford University with a master's
24 and a B.S. in geology. And I moved to the
25 sustainability side dealing with water management

1 and with resource management for the greater part
2 of my career, and so -- and I'm very familiar with
3 both sides of the question and hopefully I'll be
4 able to balance -- balance the discussion.

5 To start out with, what -- what our plan
6 is is to build on a purpose that -- that Theresa
7 pointed out. We want to -- to hear from the field,
8 hear from the West and -- about what are the real
9 issues that -- that this new development is facing.
10 And this builds on a forum that was held in D.C.
11 back in November to inform the secretary.

12 It's an outreach to you and so your voices
13 are really important and will be recorded. We have
14 a court reporter here, and so all of your concerns
15 will be taken back and put into a -- a report that
16 will go to the highest level within the Department
17 of Interior. And this is all part of the
18 department's remit of making sure that they protect
19 our natural resources in a proactive way.

20 The way the agenda works is we have a
21 first session, about 50 minutes of introduction.
22 The bulk of that is going to be used to do a little
23 grounding presentation. It's Hydraulic Fracturing
24 101. We recognize that people in the audience come
25 from very different backgrounds, some who have been

1 drilling wells their whole lives, some who are
2 landowners and really don't have a firm grasp of
3 what goes on underneath. So we're going to ground
4 everybody so that we're all speaking from the same
5 basis.

6 And following the grounding presentation,
7 we'll have two presentations from BLM where they're
8 going to talk about what their role is. Then we'll
9 take a ten-minute break and then come back and
10 speak about -- we're going to ask our panel
11 members, who will sit up here and answer some of
12 your questions and hear your concerns, to give ten
13 minutes of their perspective on this, and the
14 reason for that is we want to actually hear and
15 record their positions.

16 And -- and as far as the panel goes, we
17 have two folks from the industry, three -- three
18 people representing civil society, tribes,
19 landowners and -- and resource groups, and then we
20 also have the state regulators here. And the BLM
21 will also sit on the panel.

22 Then following that, after a ten-minute
23 break, it's to you. It's to you. It's what --
24 your opportunity to ask questions, to raise your
25 concerns.

1 Now, we want to make sure that everybody
2 has -- has -- has a chance, and so we want the
3 exchange of ideas to be courteous, obviously, and
4 we want everyone to have a chance to participate.
5 So in the question time, we'd like to keep -- keep
6 your -- your question and your concern to about two
7 minutes. So you have plenty of time to think it
8 through and pare it down and distill it to that
9 kernel because, really, people only have attention
10 for two minutes and any greater than that, you lose
11 them. So it's in your interest to make -- make
12 sure you bring your view across concisely. And if
13 you have a genuine question that needs answering,
14 two minutes should be sufficient. And the panel
15 will be given an opportunity to respond to those
16 concerns as well. Okay?

17 So that's the agenda. And I'm going to
18 just kick off with Hydraulic Fracturing 101. So
19 we've talked about this revolution that has hit the
20 oil and gas industry in North America and is now
21 moving to the world and it's a revolution they call
22 new technology, but it really isn't new. What it
23 is is it's an application of two processes that
24 we've been doing for an awful long time,
25 directional drilling that -- called horizontal

1 drilling and hydraulic fracturing.

2 Wells were drilled and hydraulic fractured
3 when I was -- before I was born and I'm a pretty
4 old guy, so it's been around a long time. But it
5 was the innovation of Mitchell in the Barnett where
6 he combined these two technologies and just in an
7 absolute obstinacy kept firing away at the rocks
8 until he got shales that could -- that were
9 essentially impermeable. Shales that you could put
10 on your roof to keep the rain out and he got them
11 to produce oil and gas. And, really, I think in
12 the future we'll probably think of Mitchell as one
13 of the, you know, heroes of our nation because he's
14 changed the energy -- the energy equation in this
15 country tremendously.

16 And here's the change. That map
17 three years -- four years ago was blank. And now
18 almost a third of the nation is a -- is an oil and
19 gas resource, mainly gas, but oil as well. You can
20 see the Bakken covers a vast area in North Dakota,
21 Montana and even into Canada.

22 Now, they talk about shale plays, but
23 really what this is is any type formation. You've
24 heard of tight sands and you've heard of the
25 Marcellus, which is a tight shale. Well, the

1 Bakken is a dolomite, which is a magnesium/calcium
2 carbonate, a reef -- a reef structure that's been
3 altered through time to have this diagenetic rock
4 strata, and the Bakken is -- is phenomenal. It's
5 the largest oil discovery since Alaska, 3.6 billion
6 barrels, and they say it hasn't even -- hasn't
7 even -- I mean that there's more to it.

8 When we look at the gas resources, the
9 Marcellus has 300 TCF; Haynesville, 250 TCF. You
10 know, compare that to Qatar and Russia, which has
11 1,200 and 400 TCF, these two formations are now as
12 great as the big gas nations in the world. And if
13 you combine it all, we have more gas than three
14 Saudi Arabias, which, you know, is why you're
15 hearing about it in the news and why it's become so
16 critical in all our energy debate. Something we
17 can't walk away from and, yet, it's -- it poses its
18 own challenges, and that's what we're here today to
19 explore.

20 So this is a video that describes how this
21 gas is -- and it's very generic. So what happens
22 is we put a pad down and then install conductor
23 casing. Conductor casing is about 20 feet deep and
24 it's installed -- oops. That's not going to work.
25 Sorry about that. It's all about 20 feet deep and

1 it forms the foundation of the rig. That gray is
2 depicting the water in the water table and that was
3 a water well.

4 And so after the pad is made, the rig
5 comes in and it looks very much like this. The rig
6 begins drilling, and through the water table the
7 drilling is generally done with a water -- a
8 water-based mud or with air and that's to protect
9 the water from any of the mud additives. That is
10 collected in a lined pit generally and if it's
11 air-drilled, it comes out dry. If it's
12 water-drilled, it comes out wet. The cuttings are
13 collected and disposed of properly. If they have
14 any -- any kind of toxicity, they're disposed of
15 accordingly.

16 After drilling through the water table,
17 the rig puts casing onto the drill string. The
18 casing is a thick steel pipe that has been
19 specified. It's centralized in the hole, dropped
20 to the very bottom of the hole and then mud is put
21 into the casing and the mud goes up around the
22 outside of the casing all the way to the surface.
23 So the idea is to protect the groundwater from --
24 from anything that goes on in the hole by having a
25 layer of cement, steel pipe and then -- and then

1 the hole itself.

2 After the -- after the casing is
3 installed, a smaller diameter drill bit goes down
4 to -- and drills to TD. And in this case,
5 different mud additives are used to stabilize the
6 well and are collected in the mud pit.

7 At this point, often the well
8 configuration changes. This is a generic
9 configuration. This is not how it's done in the
10 Bakken, but, in general, you could have casing
11 right there at the kickoff or not. In this
12 depiction the well goes all the way to TD through
13 the formation. That's a shale formation, but it
14 could be a limestone, could be a dolomite, could be
15 anything that's tight.

16 And after the well is drilled to TD,
17 another string of casing is put in. That casing is
18 dropped all the way to the bottom of the hole and
19 again cemented in. And the lateral could be
20 anywhere from a mile to two miles and the depth of
21 the hole can be anywhere from a mile to two miles.
22 Again, the -- the production casing is now cemented
23 in, and that cement goes back to a level that's
24 specified by regulations within the hole, not
25 necessarily to the surface. And so what we end up

1 with is -- is a hole filled with pipe and cement.

2 So at the surface we've got conductor
3 casing cement -- conductor casing and then we've
4 got cement and production casing -- I mean surface
5 casing. Then we've got mud, production casing and
6 then finally tubing to protect the groundwater.
7 The white would be where the groundwater would be
8 present.

9 And so after the well is drilled and
10 cased, we drop down the shothole rig or the shot
11 rig or the perforation guns. They fire off at
12 intervals, and those perforations are just simply
13 holes in the pipe and cement. That is taken to the
14 surface and the whole rig is replaced by a
15 hydraulic fracturing configuration, and there you
16 can see it. And it would include perhaps an
17 impoundment pond or some way to get it water.

18 So what happens is the water for the
19 hydraulic fracturing operation comes into tanks.
20 Those tanks then go into a mixer and the mixer adds
21 hydraulic fracturing chemicals. Then it goes into
22 another mixer which adds proppant, generally sand,
23 and then that sand and fluid mixture that with
24 vis -- viscosity goes into the low pressure side of
25 the manifold through these pump trucks, into the

1 high pressure side of the manifold and downhole.
2 And this whole thing is monitored by that rig over
3 there on the right, which is your hydraulic
4 fracturing rig that monitors the pressure of the
5 operation.

6 As the fluid goes downhole, it goes into
7 the perforations and it exceeds the stress rating
8 of the rock, breaks the rock up, and along zones of
9 weakness, fractures are induced. And the sand that
10 was put into the fluids gets dragged into those
11 fractures and the sand finds its way in and holds
12 the fracture open when the water is drained out.
13 And you'll see the water being drained out and the
14 fractures staying open. And then the gas flows to
15 the surface and the water flows to the surface.

16 So what's -- you can see on your very
17 right a -- the fractures of the previous job, and
18 what happens right here, there's some sort of
19 bridge plug generally installed. This is a typical
20 well. It's done slightly differently in the Bakken
21 because this is generally a slotted liner. And,
22 again, the gun is blown off and, again, a similar
23 hydraulic fracturing crew comes in, and in stages
24 this entire lateral, which can be a mile to two
25 miles long, is then fractured out and this whole

1 formation then becomes productive.

2 And the gas and water flows to the
3 surface. The flowback initially is tremendous.
4 It's a large volume, anywhere -- you know, the
5 majority to half of -- half the water flows back,
6 sometimes less -- it depends on where you are in
7 the country -- and it's contained and disposed of
8 properly.

9 What's good about this technique is that
10 if we had to do it vertically, it would involve an
11 enormous amount of wells and would not be economic;
12 but because we can use this lateral technology and
13 fracturing, we can open up an awful lot of space
14 with very little surface disturbance.

15 And that is the revolution. That's the
16 technology. That's what we're here to talk about
17 today, and hopefully I can advance -- oops. Let's
18 see if I can -- there we go.

19 Now, you've read in the newspaper and
20 you've seen on TV issues with this technology, and
21 so what I'd like to do is go through very
22 pictorially where it can go wrong because it -- it
23 looks like it's sort of a fail-safe thing, kind of
24 like driving a car or taking off on an airplane.
25 If you do it right, it's fine.

1 So where -- you know, we've seen how we do
2 it right. Where might it go wrong and where are
3 the risks? And we'll look at two parts of this,
4 the drilling and well design and then the hydraulic
5 fracturing itself. So this is the drilling and
6 well design. This is the hydraulic fracturing
7 itself.

8 So let's look at the first part, the well
9 design. As we've said, we've got the conductor,
10 we've got the surface casing and then we've got
11 this production casing with a cement liner. So any
12 nasties down here are protected from getting into
13 the water table because it's behind, like we say,
14 seven layers or barriers that are put in place up
15 here.

16 So on an ideal situation, we've got --
17 these red dots represent produced water or gas or
18 oil. They're kept -- kept out of the annulus.
19 They don't move up the hole and get into the
20 freshwater unless they're in the production tubing.
21 See how that works? So that's the ideal situation.
22 No leaks in or behind the casing.

23 Now, where has it gone wrong? And I'm not
24 saying this has gone wrong in North Dakota. I'm
25 just responding to the 60 Minutes and New York

1 *Times* and *Wall Street Journal*. It's been very much
2 in the news. Where it's gone wrong is when we have
3 not had a really good cement job. And you have
4 shallow producing zones that can leak either fluids
5 or -- or gas or saline materials, if this is
6 artesian, up the annulus. The pressure builds up,
7 and there you can see that at the shoe, at the
8 bottom of the surface casing, you actually get
9 communication with the formation and it potentially
10 could actually end up back into the water table.
11 And this has occurred in the field.

12 Where else can you go wrong? Well, if the
13 engineers don't design their wells quite right and
14 they don't get the cement right and there's a
15 shallow producing zone that's not recognized and
16 the cement doesn't go high enough, there's nothing
17 protecting this well except -- and so the gas can
18 go up, pressure builds up and gas comes off at the
19 shoe or -- potentially contaminating groundwater.

20 There have been cases where the actual
21 pipe has -- has broken and this shows that the
22 casing needs to be very strong and the integrity of
23 the casing. There have been cases where a biogenic
24 coal seam really close to the surface has caused --
25 has used the surface casing with -- which had a bad

1 cement job, to get into the water table.

2 So the message here is that well integrity
3 is absolutely key, and we have systems and
4 processes to making sure that's the case. And if
5 you look at the well drilling operation, the -- I
6 mean the vast, vast majority of wells drilled are
7 drilled safely and produced safely. But when we do
8 discuss with the panel here, I just wanted to give
9 you that background so that -- so that we can
10 respond to it.

11 Now, there -- so if -- if this well is
12 drilled right and the rules are followed,
13 absolutely no problem. Like I say, the vast
14 majority of wells are in this condition.

15 You've also heard in the media the --
16 there's a real concern about hydraulic fracturing,
17 this -- this activity down here at depth, perhaps
18 somehow the water getting up the aquifer by
19 cracking the rock and getting into the water zone.
20 And I think that there's a scientific consensus --
21 and the EPA is checking this out because we want to
22 make sure that, indeed, there is no situation where
23 this could occur. But Zoback from Stanford and
24 others who have looked at the rock physics have
25 determined -- and this is borne out by the seismic

1 data, this is a microseismic display -- that,
2 really, when you start fracking, there is no -- no
3 way to drive these fracks any greater than a couple
4 of hundred feet -- hundreds of feet, not thousands
5 of feet.

6 And, you know, we know that these wells
7 are drilled anywhere from a mile to two miles down.
8 And so that would mean that these fractures would
9 have to travel thousands of feet to contaminate the
10 groundwater. It's a bit -- and scientists will say
11 there's a very low probability and laypeople will
12 say, "Well, that means that there is a chance."

13 Well, there's a low probability of
14 shooting a bottle rocket to the moon. Scientists
15 will say that. If you shoot enough of them, you
16 might get lucky and get one to the moon, but most
17 of them go about 200 feet and then fall down. And
18 so it's kind of in the realm of that kind of
19 probability.

20 And to compound the situation and make it
21 even harder to shoot the bottle rocket to the moon
22 is that this frack operation is only active for a
23 matter of days and then -- then the gradient is
24 turned around. So the water comes in and fracks
25 the rock, but then the well goes into production.

1 And so, really, this becomes a low pressure zone.
2 So if anything, water is flowing down into this
3 zone, and so if there was a fracture that, say, did
4 get up into these higher zones, it would be not to
5 the detriment of the groundwater, but the detriment
6 of the producer because the producer is going to be
7 having to manage a lot of nasty water that he
8 doesn't want or she doesn't want.

9 And so in terms of the fracking operation,
10 it's not in anybody's interest to propagate these
11 beyond the shell -- the shale, and that's what
12 everybody works toward because it makes the whole
13 \$10 million operation uneconomic if you blow it.

14 And so with that background, we'll move
15 forward. So now, we've seen -- we've seen pictures
16 of water on fire and we've seen people who have
17 wells that are drilled next to -- next to active
18 producers where -- where they're, you know,
19 producing methane in their water, and all of those
20 pictures that I showed you previous to that, it
21 could be because this well is not operating
22 properly. But we do know that there are a number
23 of cases where this well is operating absolutely
24 properly and this well does have methane in it.
25 And for a layperson you think, How can that be?

1 How can this well have gas in it? Gas comes from
2 great depths.

3 Well, it's not -- in different oil
4 provinces, it's not necessarily the case. I think
5 that in -- I mean there's a perpetual flame here in
6 South Dakota [sic] that it comes from biogenic gas,
7 and the way that works is you've got this coal seam
8 and it's sitting there and it's full of gas and
9 it's like a 7-Up® bottle with a cap on it. That
10 gas is a solution that's just sitting there. And
11 this farmer comes along and he drills his well and
12 then he starts producing it. And what happens is
13 he lowers the water table and that lowering of the
14 water table reduces the hydrostatic pressure, and
15 he just takes the lid off that 7-Up® bottle and gas
16 just bubbles up out of the coal seam and into his
17 water.

18 And this is happening. We know this is
19 happening. And why I bring this up is that one of
20 the topics that we're going to discuss is
21 disclosure, disclosure of the chemicals that go
22 into this well. When you have this situation and
23 this landowner is implicating this guy and this guy
24 says, "It's not my responsibility," the one way to
25 decide who's right is to fingerprint this gas and

1 compare it to what's coming out of this hole. And
2 if there's no comparison, then you can say that
3 this is not this guy's fault. But if there is a
4 comparison, if the fluids or the chemicals that are
5 found in this well were also put in this well, then
6 those other situations, so -- would apply. So
7 that's why disclosure and that's why the public is
8 so keen on understanding what goes in these wells.
9 And we'll talk about that during -- during our
10 panel discussion.

11 And we also -- I think we're going to have
12 people who are concerned about surface
13 considerations. Currently the way these wells are
14 drilled, they're drilled in an array format. They
15 go down and then out anywhere from a mile to two
16 miles and we get this long line of -- of drill
17 sites. And -- and this is what it looks like for a
18 month or so and then the hydraulic fracturing crew
19 comes in and -- and it looks differently.

20 And there are -- there are techniques, and
21 hopefully we'll discuss them, where we can -- we
22 can really greatly reduce the surface impact by
23 doing multiple wells in one pad. So in this case,
24 instead of having only one well going down and
25 having three pads, we have six wells on a pad

1 covering a much broader area. And, you know, we
2 saw that map of the United States and these --
3 these operations are different than a conventional
4 oil field that is fairly well confined around where
5 the oil is. These cover the entire basin. And so
6 as we move forward with this development, it will
7 be important to consider how we can reduce the
8 footprint.

9 And so that's it. That's it with the
10 grounding presentation.

11 Now what I'd like to do is introduce to
12 you Mike Worden and he's going to come up and talk
13 to you about BLM's role in all of this. And
14 he's -- his background is petroleum engineering.

15 (Applause.)

16 MR. WORDEN: Thank you, Rich. My name is
17 Mike Worden. I'm a petroleum engineer with the
18 Bureau of Land Management out of our Washington,
19 D.C., office. I earned my bachelor's in petroleum
20 engineering from the University of Alaska
21 Fairbanks, so I appreciate the snow in April.

22 Before joining the Bureau, I worked on the
23 North Slope of Alaska for a few years. Joining the
24 Bureau, I started working in Buffalo, Wyoming,
25 where I worked for five years before accepting the

1 assignment in Washington.

2 What I'm here to talk about is BLM's
3 regulatory authority. This is in addition to any
4 state or local regulations and authorities.
5 Protection of the resources, health and environment
6 begin long before hydraulic fracturing equipment
7 arrives on location. In fact, it begins long
8 before the drilling rig shows up on location. It
9 begins with the application for permit to drill.

10 When the operator submits an application,
11 or APD, the BLM reviews -- begins its review
12 process. Each federal well must receive an
13 application for permit to drill. A federal oil and
14 gas well is a well that's on minerals managed by
15 the Bureau of Management. Which minerals
16 are those? They can be minerals within the
17 National System of Public Lands, minerals that are
18 on the Forest Service or other federal agencies.
19 They can even be lands under private surface that
20 the federal government maintains and owns. What
21 federal minerals are not are privately held
22 minerals or state-held minerals.

23 Every permit must follow our Onshore
24 Order 1. The Bureau has -- in addition to its
25 regulations, it has orders. An Onshore Order 1 is

1 how an operator completes the permit process and
2 what's required. Orders are promulgated through a
3 rulemaking process that requires public input.

4 Some of you may remember that Onshore Order 1 was
5 revised in 2007 and that throughout 2005 and 2006
6 we were receiving public comments.

7 There are many parts of Onshore Order 1.
8 The one that pertains most to hydraulic fracturing
9 would be the drilling plan. Part of the drilling
10 plan requires that every formation that's going to
11 be drilled through is named, its depth is provided
12 to us. We also need to know the thickness of the
13 formations in any area where there's usable water.
14 The proposed casing design is also given and
15 reviewed and cement program for how we're going to
16 isolate these usable water areas and other minerals
17 from the wellbore.

18 Onshore Order 1 also requires a surface
19 use plan and it can, when we approve the permit,
20 have conditions of approval. Conditions of
21 approval are permit or site specific and are added
22 to the permit at the field office level when it's
23 approved.

24 All drilling operations are conducted
25 under our Onshore Order 2. This requires that

1 casing and cementing programs are what was proposed
2 and approved and then are followed. They must
3 protect and isolate all usable water zones.

4 They -- also, part of Onshore Order 2 is
5 if an unexpected zone, water -- usable water zone
6 is hit, it must be reported. This is to ensure
7 that we know where all the zones are and that they
8 are protected, but it's also used later on in our
9 review process for future APDs.

10 Usable water. What is it? Usable water
11 generally means those waters containing less than
12 10,000 parts per million of total dissolved solids.
13 Sorry about that. You didn't know what I was
14 talking about. It generally covers part of the
15 aquifers that are 10,000 parts per million total
16 dissolved solids. The reason "generally" is in
17 there is because the state regulator or the EPA can
18 exempt some aquifers from this standard and from
19 the Safe Water Drinking Standard, which is where
20 this number is taken from. This shows a
21 cooperation between federal agencies when we're
22 trying to regulate. We have similar numbers -- or
23 the same numbers.

24 Once the drilling operation is complete, a
25 well completion report must be submitted to the

1 local BLM office within 30 days, along with 2
2 copies of all logs that are run. The well
3 completion report is used by the local field office
4 to assure that what was proposed is what was done
5 and any deviations from that proposal were already
6 known about in advance.

7 Hydraulic fracturing operations. In this
8 area hydraulic fracturing operations usually come
9 in under the APD process, or proposed under there,
10 but in every -- in every area once a well has been
11 hydraulically fractured, the BLM is notified. We
12 receive a report of the process that was used and
13 this is for review by the local BLM staff.

14 With that, I'd like to introduce Don
15 Judice, who is a local petroleum engineer for the
16 Bureau of Land Management.

17 (Applause.)

18 MR. JUDICE: Good afternoon. My name is
19 Don Judice. I'm a petroleum engineer and the field
20 manager for the Great Falls Oil and Gas field
21 office in Great Falls, Montana. I have a Bachelor
22 of Science degree from the University of Pittsburgh
23 and have been employed as a petroleum engineer with
24 BLM for the past 28 years, working at various
25 levels within BLM in both Wyoming and Montana.

1 I'd like to thank Lonny Bagley, the North
2 Dakota field manager, for inviting me to
3 participate in this forum.

4 First off, I'd like to mention that of all
5 the wells drilled in the state of North Dakota, 25
6 percent are drilled to federal or Indian minerals,
7 putting them under the jurisdiction of BLM. The
8 majority, or 75 percent, are managed by the State
9 of North Dakota.

10 As discussed earlier by Mike, BLM has the
11 responsibility to permit the drilling of wells on
12 federal and Indian trust minerals. The APDs
13 processed here in North Dakota involve an
14 interdisciplinary review by BLM specialists, such
15 as petroleum engineers, geologists, land law
16 examiners and natural resource specialists.

17 To ensure that this activity is done in an
18 environmentally safe manner, BLM has a number of
19 review steps in the APD process. Petroleum
20 engineers review the drilling plan. The surface
21 use plan of operations is reviewed by the natural
22 resource specialist.

23 Prior to approving the APD, an
24 environmental document, most generally an
25 environmental assessment, is prepared. Also, BLM

1 ensures that there is adequate bonding by the
2 operator.

3 Now, let's concentrate on the drilling
4 plan. There are nine points to the drilling plan,
5 but I'm just going to want to focus on just a few
6 today. If you remember back to the first
7 presentation by our moderator, well integrity is
8 the key. When looking at the hydraulic fracturing
9 process proposed by the operator, this section of
10 review on casing and cement is critical.

11 Petroleum engineers in North Dakota run
12 calculations to determine the adequacy of the
13 operator's proposed casing design. The casing
14 type, grade and length must meet stringent design
15 safety factors before BLM approves its use. This
16 concise review is performed to reduce the level of
17 risk to potential problems later on.

18 Likewise, the amount and type of cement is
19 reviewed to ensure it has the proper compressive
20 strength for its intended use.

21 Petroleum engineers also review the
22 proposed well control and blowout prevention
23 equipment to ensure there is adequate protection of
24 the surface should there be an uncontrolled flow.

25 BLM ensures that the operator runs the

1 proper types of logs which gives vital information
2 on the characteristics of the subsurface
3 formations. Knowing the bottomhole pressure and
4 any abnormal conditions gives petroleum engineers
5 vital information when designing casing, cementing
6 and surface protection.

7 For federal and Indian trust minerals, BLM
8 has an inspection and enforcement strategy. Each
9 well is given a level of risk. This level of risk
10 has the following factors: The operator and the
11 rig contractor's compliance; there's a risk by
12 looking at the proximity of the well to water
13 bodies; and, in general, the location of the well,
14 if it's in an environmentally sensitive area.

15 All high-priority wells are inspected in
16 accordance with federal regulations, onshore orders
17 and any permit conditions of approval.

18 BLM here in North Dakota performs various
19 types of inspections, like nondetailed, detailed
20 inspections, well control, casing and cementing
21 inspections.

22 When a well is completed and ready for
23 production, a completion report is required to be
24 submitted. Petroleum engineers here in North
25 Dakota review this report to ensure the well was

1 drilled according to the APD. A concentrated
2 review is performed on the cement bond log to
3 ensure proper cement-to-casing bonding. On this
4 form the operator reports the type of fracture
5 stimulation that was performed on the well.

6 This is a wellbore schematic of a typical
7 well here in North Dakota. It may be a little
8 difficult to read, but it's intended to show the
9 design review that is performed by BLM. Again,
10 well integrity is the key and design criteria is
11 scrutinized.

12 I'll see how steady my hand is. Again, if
13 you remember in the opening slides about the
14 discussion of where surface casing -- you know, we
15 have conductor casing set here, normally at about
16 80 feet. Surface casing is set normally to about
17 2,000 feet and this gray area that was nicely
18 colored in is showing where the cement is.

19 So in -- here in North Dakota this is a
20 great example of a typical well being drilled that
21 the water zone is normally within the area of the
22 Fox Hills aquifer and it lies in -- in about this
23 area where I'm pointing here, where it says cement
24 sheath. The operators in this area are required to
25 cement all the way down through the bottom of it

1 and 50 feet below the bottom of the entire Fox
2 Hills aquifer. So it is all behind cement and
3 casing and then, again, there's a level of
4 protection with the production casing and then with
5 tubing. So there's a level of protection, again,
6 that -- that BLM reviews.

7 Okay. At the end of the life of a federal
8 or Indian trust mineral well, a Sundry Notice is
9 required which details how the well is to be
10 abandoned. BLM strategy is to witness the plugging
11 of each and every well to ensure that all
12 subsurface zones are isolated and freshwater is
13 protected. Natural resource specialists are
14 involved to ensure the surface is reclaimed and
15 reseeded with the objective to bring the location
16 back to its original condition.

17 That is all I have, Rich.

18 MR. WARD: Terrific. Well, that leaves us
19 just on time. We've got ten minutes to visit with
20 friends, to think about any questions that might
21 have arisen from these presentations and to take a
22 bio break. Go out and stretch in the beautiful
23 sunlight before it sets.

24 What will follow is a series of
25 presentations here again, industry, those

1 representing civil society and those representing
2 the states, and then we'll get into the panel after
3 that.

4 Thank you very much.

5 (Recessed at 4:52 p.m. to 5:04 p.m.)

6 MR. WARD: If we could start moving back
7 in, we'll begin the second part of this forum. If
8 you're coming in from the lobby, it would be good
9 to grab some three-by-five cards. We're using them
10 to collect your questions and concerns. When we
11 get to the -- once we finish this panel and we get
12 to the last part of this program, there are two
13 ways to submit comments to this process. One is by
14 writing it down on a card and giving it to me and I
15 can read it to the panel members, and another way
16 is to approach the mikes and speak it out yourself.
17 So we have a process for the introverts and a
18 process for the extroverts.

19 And so over the next 60 minutes or so,
20 we're going to hear ten-minute presentations from
21 three perspectives, from the State -- perspective
22 of the State's, from the perspective of the
23 industry and from the perspective of civil society.
24 And so what I'd like to do is introduce Lynn --
25 Lynn Helms, the director of the North Dakota Oil

1 and Gas Commission, who will walk through some of
2 the rules and other -- other aspects of what he
3 does for a living in order to protect our resources
4 and from a -- natural gas drilling. So Lynn.

5 MR. HELMS: Thank you, Rich. Appreciate
6 being here this afternoon. When I got up this
7 morning, I thought I was going to have to give my
8 usual greeting of Happy January 109, but the day
9 has changed in the middle, and so we're no longer
10 stuck on Ground Hog Day and waking up every morning
11 to January. Thank you for coming out this
12 afternoon.

13 As Rich said, I'm the director of the
14 Department of Mineral Resources for the State of
15 North Dakota. I got an engineering degree from
16 South Dakota School of Mines in Rapid City, South
17 Dakota. Following that -- well, during that period
18 of time I worked on drilling rigs to help fund my
19 college education. Following that, I worked for
20 Texaco for two years, producing -- all the
21 producing fields in Montana, some of that spent
22 actually working on drilling rigs as the drilling
23 supervisor, as well as the mud logger. Then I
24 moved to Williston and worked for Hess Corporation
25 for 18 years, a lot of interesting places, like

1 Alaska and Abu Dhabi, Arkansas, Texas, Louisiana.

2 And so I landed here in 1998 and love the
3 job. The Department of Mineral Resources is made
4 up of the oil and gas division, which has been
5 around since 1981 and regulates the oil and gas
6 industry. Geological Survey has been around a
7 little longer, since 1895, and the job of that
8 department is to promote the resources of the
9 state.

10 I want to kind of use this as an
11 illustration and this will be part of the record.
12 This is a simplified geology cube that we've
13 created. This is in the Parshall area, Parshall
14 and Sanish area, and we've now created one that
15 covers the whole northwestern quarter of the state
16 and we're going to do this across the entire state
17 of North Dakota, but it helps the layperson to
18 understand the geology and the layers that we're
19 talking about.

20 Williston Basin is unique in that the
21 entire geological record exists here. Very few
22 basins have the entire geological sedimentary
23 record from the Ordovician or Precambrian rocks,
24 all the way up to the Cretaceous rocks, but we have
25 them here. Every basin is unique, and you need to

1 remember that. Colorado, Pennsylvania, Wyoming,
2 entirely different than what we have here in North
3 Dakota, and they have to be treated differently
4 because they are unique.

5 We'll come back to this, but I just want
6 to point out that here's what we're dealing with.
7 In this top 2,500 feet above mean sea level is
8 where our freshwater resources are located. And
9 we're all about protecting that. The intervals
10 that we're talking about hydraulically fracturing
11 and recovering oil from are down here at some 6,000
12 to 8,000 feet below the earth surface or 6,000 to
13 8,000 feet below our freshwater resources.

14 I want to point out that life cycle
15 regulation of hydraulic fracturing is nothing new
16 in North Dakota. We've been doing it for decades.
17 That seems to be the buzz word, but it's nothing
18 new here. Our Water Commission takes care of the
19 water sources. Our Industrial Commission takes
20 care of the water use. Our Health Department takes
21 care of cleanup of any unplanned releases. And the
22 Industrial Commission comes back in when we talk
23 about water disposal. And we'll talk about each
24 one of these items in turn.

25 First of all, the Water Commission

1 regulating our water appropriations. Their job is
2 to guard against mining our groundwater resources,
3 and so they keep track of all the aquifers and make
4 sure that we don't withdraw more water than what
5 the recharge is and that the head isn't dropping in
6 those resources. And so they're in tight control
7 of those water permits to make sure that we
8 preserve our groundwater resources.

9 Hydraulic fracturing is a thirsty process.
10 You can see here that we're projecting, going
11 forward, drilling a couple thousand wells a year
12 and we're going to consume 30 million gallons of
13 water a day as we do that. That sounds like a huge
14 amount of water, but North Dakota is not only
15 blessed with great mineral resources, but
16 tremendous water resources. If we were to take all
17 of that out of Lake Sakakawea with no water coming
18 in and no water going out, we would take one inch
19 per year off that lake, and that's what that
20 amounts to.

21 We are also the beneficiary of tremendous
22 human resources, and so you can see that this oil
23 and gas thing that is going on in western North
24 Dakota is generating in the neighborhood of 27,000
25 new jobs in western North Dakota, and in the long

1 term we expect to have some 26-plus thousand new
2 wells on the landscape out there and every one of
3 those is going to generate a job -- a permanent job
4 here in North Dakota.

5 You're going to hear, I think, during the
6 comment period from some local government
7 officials, who are dealing with that aspect of the
8 world, to some extent delighted with the influx of
9 people and the new jobs and to some extent
10 nonplussed or scratching their heads over how to
11 deal with it and how to handle it.

12 But I want you to leave with this message:
13 North Dakota has tremendous mineral resources,
14 tremendous water resources and incredible human
15 resources, and that is why industry wants to be
16 here.

17 This is the law that governs our water
18 resources and the Water Commission. Please don't
19 try to read that, but I wanted it to be part of the
20 record. They certainly have the authority to
21 monitor and govern those water withdrawals.

22 Again, the North Dakota Industrial
23 Commission regulates the well permitting and
24 construction on federal, fee and tribal lands. We
25 don't do it like every other state. We take a look

1 at every single well. We -- our job is to assure
2 that there is a minimum of two steel casings and
3 two layers of cement installed and tested between
4 the groundwater and any fluids that go into or come
5 out of that well. The hydraulically fractured
6 formations, as I said before, are six to eight
7 thousand feet below our freshwater formations, and
8 there are dozens of layers of impermeable clays,
9 shales, salts and limestones in between.

10 If we look back at our model, this entire
11 layer in here, there are layers and layers and
12 layers between the Bakken and Three Forks where
13 these horizontal wells land and our freshwater
14 resources of impermeable rock material. The only
15 possible pathway is those wellbores, and that's why
16 our focus is on wellbore construction and wellbore
17 maintenance.

18 The jurisdiction lies with the Industrial
19 Commission, and I have placed in the record today a
20 statement from our Industrial Commission. Our
21 Industrial Commission has a job and the law says it
22 is to foster and encourage the development of our
23 oil and gas resources. It's also supposed to
24 regulate that development. That statement says
25 that hydraulic fracturing is an acceptable process

1 in the state of North Dakota. It says that the oil
2 and gas division has a proven record of regulation
3 and environmental protection and that this process
4 is best regulated by state statutes and rules.

5 If you could slice one of these Bakken or
6 Three Forks wells open, this is what you would see.
7 The freshwater resources, as I said, are located up
8 here behind the surface casing in the top
9 2,500 feet or so. There are two layers of casing
10 that go down through there, another layer of casing
11 that goes around the bend and then a horizontal
12 drain hole out here where the hydraulic fracturing
13 takes place. Typical wellbore construction.

14 I want to talk a little bit about the four
15 primary wellbore failures that we've had. The
16 first one is up in Dunn County, the Martin Federal.
17 It's a well where during the hydraulic fracturing
18 operation, it balled off down here in the lateral
19 and so the pressure spiked inside the wellbore.
20 The seven-inch casing failed here at the surface
21 and the nine-and-five-eighths casing failed at
22 about 2,000 feet, 2,046 feet, and also at the
23 surface.

24 It was an unusual situation because in
25 that case there was radioactive tracer in the frack

1 sand, and so the radioactive tracer was put into a
2 special pit that was located there on that site and
3 it will be removed later. It has now been there
4 and at this point in time the radioactivity has
5 gone through about 15 half-lives and it's down to
6 6/1000 of the original radioactivity. But that's
7 going to be removed here in about another year and
8 taken off to a disposal facility out of state where
9 radioactive wastes can go. So it will have to go
10 out of state, to either Idaho or Colorado. But
11 that pit's going to be dug up and removed once the
12 radioactivity is at absolutely safe levels.

13 The second one was the Killdeer well, the
14 Franchuk. It again balled off. In that case, the
15 seven-inch casing failed at 40 feet and the
16 nine-and-five-eighths casing failed at 39 feet,
17 104 feet, 141 feet and 188 feet. So right up in
18 here. We have drilled eight nested monitoring
19 wells around that wellbore. We have found no
20 evidence of contamination at this point, but we're
21 not done. And Dennis Fewless is going to talk
22 about that, the monitoring that's going to go on
23 there for a period of several years to make sure
24 that groundwater did not end up getting
25 contaminated.

1 Best available technology installs an
2 additional third layer of steel before
3 hydraulically fracturing these wells, and we've had
4 a couple failures there. The one up by New Town
5 sanded off down here in the wellbore, so the sand
6 clogged off the wellbore and it pressured up. When
7 they tried to flow it back, a fitting here above
8 the surface, a two-inch fitting, washed out. And
9 so we had an uncontrolled incident for a few days
10 there, but nothing happened below the surface and
11 no contamination took place.

12 The final one was the most recent one up
13 by Arnegard and that was a treating line on the
14 surface that failed. One of these lines sprung a
15 leak at 2:30 in the morning and so the well began
16 to flow back through that break in the line and
17 ultimately ended up on fire. But, again, no
18 underground contamination.

19 This is a picture of what it looks like on
20 the surface when they're fracking one of these
21 wells. There's somewhere in the neighborhood of
22 60,000 barrels of water brought onto that location
23 and they pump for a period of five or six days at
24 very high pressure and this is what happens
25 underground, and you saw in the video illustration

1 what happens on the ground at 6,000 to 9,000 pounds
2 per square inch, 500 to a thousand gallons a
3 minute. Millions of pounds of sand and ceramic
4 proppant are pumped in there, and that's the whole
5 purpose of it is to get that sand and ceramic
6 proppant into the rock so that the oil and gas can
7 flow back.

8 The Industrial Commission regulates
9 reporting of any spills or releases. They have to
10 be reported to us within 24 hours. Then if there
11 is a possibility that surface water or groundwater
12 is in danger, we turn over primary jurisdiction to
13 the Health Department through our MOA. The Health
14 Department oversees the cleanup of any discharge to
15 the environment and then EPCRA kicks in. The
16 material safety data sheets are collected.

17 We have the material safety data sheets on
18 every one of these incidents that I talked about.
19 They're in our possession. We know exactly what
20 was pumped into those wells and what we need to
21 look for. I don't want to spend a lot of time on
22 the chemicals, but we'll talk about them in a
23 minute.

24 This is the notification of fires and
25 leaks requirements in state code. This is the

1 Health Department's jurisdiction over discharge of
2 wastes. This is their administrative code. And
3 then this is the federal law, EPCRA, which deals
4 with those material safety data sheets and making
5 sure that you know what's stored at that warehouse,
6 you know what's transported to the well and you
7 know what's hauled back.

8 Emergency notification requirements, all
9 of this is in federal law right now. There are
10 those material safety data sheets that I talked
11 about and toxic release information.

12 I'm not going to spend a lot of time on
13 these slides. I just want to show you what a
14 typical hydraulic fracturing job in North Dakota is
15 composed of, and I guess I just want to ask you a
16 question. If in recent time you have swallowed
17 swimming pool water or used makeup remover or
18 toothpaste or hand soap or lemon juice, then you
19 have ingested all of these things at very low
20 concentrations like they are in the frack fluid.
21 The risk here is -- is when they're being
22 transported back and forth and they're in their
23 concentrated form.

24 Finally, I want to talk about the flowback
25 water and the end of the life cycle. The North

1 Dakota Industrial Commission regulates this. It's
2 regulated through our underground injection control
3 program, which is under the oversight of the
4 Environmental Protection Agency. The disposal
5 formation is about a quarter of a mile below our
6 freshwater zones and the formations in between are
7 impermeable. This is what it looks like. So our
8 disposal goes into the Dakota, and this is
9 2,500 feet of bentonite shale between there and the
10 deepest freshwater resources in the state.

11 We do not allow earthen pits and open
12 receptacles. Only in an emergency situation are
13 they allowed to be used and that material has to
14 come out of there within 72 hours. And so we don't
15 allow that for flowback water or for produced
16 water. All of that has to be disposed of in an
17 acceptable manner under the regulation of this
18 program.

19 I do want to make one mention of the
20 oversight of this program. I don't know if it's
21 the black sheep of the family or what it is. The
22 EPA has oversight over our program, but the last
23 time an EPA person came to Bismarck, North Dakota,
24 and checked our records was in September of 2001.
25 And so, again, I just want to say that doesn't mean

1 we're going to relax, that doesn't mean we're going
2 to take our eye off the ball, but we are absolutely
3 in control and in charge of this program and we
4 care deeply about it. We have two people on our
5 staff that are dedicated full-time to oversight of
6 this program.

7 That brings my presentation to an end.
8 I'll be taking part in the panel discussion here.
9 I thank you all for coming out. We are proud of
10 what we do in this state. We value our mineral
11 resources, our water resources and our human
12 resources. We live here. We're your friends and
13 neighbors, and we want to do the right thing.

14 Thank you very much.

15 (Applause.)

16 MR. WARD: I would like to ask Dennis to
17 come to the podium, Dennis Fewless, who is going to
18 speak about the water rules, and I think Dennis is
19 going to be fairly brief. So -- and then after
20 that, we'll have -- we'll have the perspective from
21 industry.

22 (Applause.)

23 MR. FEWLESS: Good afternoon. Again, my
24 name is Dennis Fewless. I am in the environmental
25 health section of the North Dakota Department of

1 Health, the division of water quality, and I've
2 been with the Department of Health for 35 years and
3 worked on many water quality issues, many
4 permitting issues and many cleanups of spills as we
5 are experiencing these days.

6 The Department of Health has primacy for
7 surface and groundwater in North Dakota. This
8 means we implement the Safe Drinking Water Act and
9 the Clean Water Act rules for the state.

10 As this relates to our topic today, we
11 have agreement with the state oil and gas
12 department, as Lynn mentioned earlier. This
13 agreement delineates the responsibilities of each
14 agency and oil and gas and Lynn administers what
15 happens on the site or the production facility, and
16 the Department of Health has oversight of the
17 fluids if they leave the drilling or production
18 area.

19 In addition, we also nowadays are
20 responding to pipeline breaks and truck accidents
21 and rollovers, et cetera.

22 Our goal is to have a spill containment as
23 close to the release site as possible because it is
24 inevitable that we are going to have accidents, but
25 we just need to be proactive. This reduces the

1 environmental impact and potential of a release
2 reaching waters of the state of North Dakota.

3 It's -- the success of containing a
4 release is a timely response by the responsible
5 agency. This timely response, which means 24/7, is
6 a topic that we want to emphasize and explore more
7 in the near future with industry and the oil and
8 gas division of North Dakota.

9 For example, are there adequate materials
10 available for cleanup and are they located
11 strategically in oil patch country? And, also, is
12 there properly trained personnel available to
13 utilize these materials and clean up a release,
14 again, on a 24/7 basis?

15 And switching gears just a little bit,
16 we've also been working diligently with the local
17 communities and industries in upgrading the
18 infrastructure for the workforce. This includes
19 providing safe drinking water and adequate disposal
20 of wastewater, which seems like it may not be that
21 big a situation, but when -- when you have this
22 large influx of people in a short period of time
23 in -- in communities that aren't used to this
24 population, it certainly is a challenge, but
25 hopefully we can keep up with it.

1 And also as Lynn mentioned, I was going to
2 talk about the well at Killdeer, and we are working
3 with responsible parties and with the oil and gas
4 division on putting in a group of nested wells
5 around this oil well, nested monitoring wells, and
6 we will be analyzing for 6 different chemical
7 groups totaling 184 parameters. And -- and
8 initially when we had this incident at this well,
9 we did sample all the -- all the -- the individual
10 wells and any private wells in that -- in that
11 vicinity and -- and have base ground -- baseline
12 information and have not -- not seen any effects
13 from -- from that release.

14 So with that, I -- I have just briefly
15 gone through some of our activities that we're
16 dealing with in the last couple years and look
17 forward to answering any questions during the panel
18 discussion. Thank you.

19 (Applause.)

20 MR. WARD: Thank you, Dennis.

21 Moving right along, we have John Paneitz,
22 who is a petroleum engineer with Whiting Oil
23 Corporation, and he's going to present a few
24 slides. I'll get those out.

25 MR. PANEITZ: Thanks, Rich. I'd like to

1 thank the BLM for inviting me to come out and talk
2 today and I'd like to thank you-all for coming out
3 as well, for letting me talk about something that's
4 very near and dear to my heart.

5 Hydraulic fracturing is not really
6 elevator small talk, but over the last couple of
7 years I've given several presentations about
8 hydraulic fracturing. Usually it's about the
9 innovative technology and approaches to drilling
10 our long laterals and completing them that has
11 allowed Whiting to become a leader in North Dakota.

12 Today's topic is a little bit different in
13 that -- not quite as much fun, but that it's -- I
14 feel like I'm defending some of the technology and
15 processes that have allowed the oil industry to
16 become so successful here in western North Dakota.

17 But I'd like you to also keep in mind that
18 I'm not a manager at Whiting. I'm not a
19 policymaker. I'm a petroleum engineer and just one
20 of a team that strives to keep -- that strives to
21 get the most oil out of the ground, out of each and
22 every well, both economically, safely and according
23 to all industry and governing regulations.

24 Personally, I've been involved with the
25 Sanish field operations just south of Stanley,

1 north of New Town, since day one. I've personally
2 supervised many of those jobs, not all of them. I
3 live in Denver, but I've made enough trips up here
4 that people in the Williston airport knew me --
5 knew me, whether it was by name, but, "There's the
6 guy that sits in seat 8A." It's well enough known
7 that at least I always got a rental car. That's a
8 premium in Williston if you've ever gone through
9 that airport.

10 But I'm proud of what our team here at
11 Whiting has done for -- in developing Bakken oil
12 and what we've done the last few years, such that
13 we are the number two oil producer in the state and
14 we are committed to making that -- to be number
15 one.

16 With that in mind, speaking of number one,
17 I'd like to emphasize my number one priority, a
18 common thread that a lot of the presenters are
19 talking today, a common theme of maintaining
20 wellbore integrity. Without it, the sophisticated
21 completion techniques that we're using just simply
22 will not work. And with hydraulic fracturing
23 treatments today costing upwards of a million
24 dollars to complete, everybody has a vested
25 interest to make sure that we do maintain wellbore

1 integrity.

2 Let's first take a look at the surface
3 equipment. We will have -- a couple key points to
4 take away here is the redundant valves that we will
5 pump through, the hydraulic fluids will be pumped
6 in through the top, down through the wellhead, down
7 through the seven-inch casing, down into the
8 wellbore in the formation below. A couple points
9 to remember, backup valves here and should we
10 happen to flow back -- need to flow back because
11 the formation didn't take all the sand, we're able
12 to flow back through these wing valves, again
13 having backup valves so that in case one washes
14 out, you still have another valve behind it to
15 maintain well control.

16 These valves are all -- and your wellhead
17 is all pressure-tested to your anticipated treating
18 pressure, typically either 7,000 or 9,000 psi, and
19 they are all either new valves or reconditioned
20 such that they're new condition.

21 The other key component that we need to
22 maintain wellbore integrity is the wellbore itself.
23 Now, they talked about -- earlier about, as a
24 petroleum engineer, doing calculations to make sure
25 that our wellbore is good and holds pressure.

1 We'll go a step further and pressure-test that
2 entire -- oops -- pressure-test that entire
3 wellbore, the seven-inch casing, to 7,000 psi by
4 use of a retrievable downhole valve. We can land
5 that in the liner top and then pressure-test
6 against that to make sure that there are no leaks.

7 We'll also run a mechanical casing
8 inspection log prior to the fracture treatment.
9 That way we can pick up any spots that are
10 defective in the casing or worn spots due to -- in
11 the drilling process. And if once we've done that
12 pressure test and that mechanical casing inspection
13 log, everything looks good, we're good to go.
14 We're ready to frack.

15 But even with the best laid plans, there
16 are a few areas of potential operational risks.
17 People said -- I've heard people say that if it was
18 easy, everybody would be doing it. But first and
19 most critical that I see -- and this was what
20 happened on our well over by New Town, is that sand
21 abrasion and cutting of the surface equipment. And
22 in our instance it wasn't during the fracture
23 treatment. It was really on flowback where you're
24 bringing the fluids back to surface that you have
25 pumped down.

1 Typically, those fluids will contain sand
2 and that sand acts as a -- can act as a -- almost
3 like a cutting torch. And where you have a
4 pressure drop and extremely high velocity of
5 fluids, that sand and fluid can erode out steel in
6 a matter of minutes, but it can happen quickly, it
7 can happen in a few hours, it can happen a few days
8 later. And that's why you need to -- then the
9 solution to that is always maintain multiple valves
10 and multiple methods to control your flow. Call it
11 a choke manifold.

12 The other -- the second area of concern is
13 related to the treating pressures, the high
14 pressures that typically, as Lynn said and I'll
15 say, that we may be treating the well at pressures
16 approaching 7,000 psi and with the limitations --
17 there are pressure limitations to pipe, just like
18 anything. So the solution to that is to make sure
19 that your treating pressures do not exceed your
20 maximum treated pressure-tested value.

21 Second of all, we will maintain automatic
22 cutouts on the hydraulic pumps that we're using to
23 pump the sand and fluid mixture in the Halliburton
24 trucks, such that as that pressure may approach
25 that value in your maximum value, the equipment

1 automatically shuts down. That's what we refer to
2 as our auto cutouts.

3 But thirdly, we'll also maintain a third
4 line of defense so that you do not exceed those
5 pressures, and that is what we call a pop-off
6 trailer, such that if your pressure does get to
7 even higher than what your cutouts are set, it will
8 pop off into the surface so that your casing is
9 never exposed to those high pressures and can
10 rupture. It can simply bleed off and dissipate
11 to -- on the surface without harming anything.

12 Thirdly -- all right. Thirdly -- oops --
13 is human error. I think everybody probably
14 understands how this can happen in that someone can
15 turn the wrong valve, somebody can make the wrong
16 decision. And, unfortunately, what we have to
17 realize is that with the boom and bust cycles that
18 our industry is prone to have happen, we have lost
19 a lot of experienced people over the years.
20 Literally thousands of jobs have disappeared and
21 people have gotten tired of going through layoffs.
22 I mean everybody loves a boom, but the bust cycles
23 aren't very much fun, either. But --

24 So what we can do is just make sure that
25 through training and the experienced people that we

1 still have around, that policies are followed, the
2 right valve is turned. And, you know, that was
3 part of what happened on our Roggenbuck well is
4 that somebody turned that inside valve first. You
5 should always work from the outside in, but they
6 closed that inside valve first and that cut out and
7 that allowed the well to not be controlled.

8 Lastly, there's always that random
9 equipment failure. And the solution to that is
10 proper maintenance and prejob testing of all your
11 equipment. And, again, in a boom cycle it is
12 prone -- everybody's in a hurry. Got to get things
13 done, got to move on to the next job, but we can't
14 take any of those short -- short corners.

15 In conclusion, I guess I'd like to repeat
16 and reemphasize the importance of maintaining
17 mechanical and pressure integrity in the wellbore.
18 Without it, our costly frack treatments do not work
19 and it is in everybody's best interests. Whiting
20 has performed nearly 200 frack treatments these --
21 over these last couple years without a downhole
22 compromise that would risk any environmental
23 contamination.

24 And I guess if we follow the guidelines
25 here, the guidelines put forth by the NDIC and the

1 guidelines put forth by the other 13 states for
2 which Whiting operates in, I'm comfortable that we
3 can continue to keep working on. Hydraulic
4 fracturing is not really a new process, but it is
5 one that we keep improving upon.

6 Thank you.

7 (Applause.)

8 MR. WARD: Thanks very much, John.

9 The operators rely heavily on service
10 companies to support their work, and so I'd like to
11 thank Mike Eberhard who is representing the service
12 companies. Mike's from Halliburton. I'll get your
13 presentation.

14 MR. EBERHARD: Thanks, Richard. I guess
15 as he said earlier, we're going to have some civil
16 presentations later so I'm probably part of the
17 uncivil part of this, but I guess that will be
18 fine.

19 I'd like to thank the BLM for the
20 opportunity to come out and present to the audience
21 here and also the -- for you showing up tonight
22 also, especially to be able to speak about a
23 subject that is so vital to the United States, and
24 that's the production of hydrocarbons.

25 Personally, I've been with Halliburton for

1 30 years, and I graduated from Montana State
2 University. I was born and raised in western
3 Montana. The first job I had with Halliburton was
4 actually in Belfield, North Dakota. I lived in
5 Dickinson. The first frack job I did was in 1981
6 and that was a Bakken frack just outside of Sidney,
7 Montana. So this has not been around -- it's not
8 that this is new technology. It's not that the
9 Bakken is a new formation. It's just that we have
10 new ways of going about it and it's made the Bakken
11 formation a world-class reservoir.

12 So with that, I'd like to get started.
13 First off, Halliburton has been in North Dakota for
14 over 60 years. We've had offices in Belfield,
15 Tioga and since 1984 we've been in Williston. And
16 this slide just kind of shows you some of the
17 impact in 2010 of our work there. We're very proud
18 of our work in North Dakota and we've been very
19 proud of our tradition here.

20 Since we had a presentation earlier on
21 what is hydraulic fracturing, I'd kind of like to
22 talk about where is the industry going, what are
23 some of the things that we're working on, what can
24 you look forward to. It is an always-evolving
25 process. Hydraulic fracturing has been around for

1 60 years, a little over 60 years, and from what we
2 were doing in the early days to what we're doing
3 today is just night and day difference. It
4 continues to evolve. Like all industries. All
5 industries are continuing to evolve, getting
6 greener. Now you can find green, you know, Windex®
7 and stuff like that. Everybody is a lot more
8 conscious, we're doing a lot more things than we
9 have in the past, and the oil industry is no
10 different.

11 Here are a few things that Halliburton's
12 been working on. First off, green technology and
13 green fluids. We have a commitment to -- any
14 fluid -- any system that we develop is going to be
15 more environmentally friendly than the last one we
16 had. That's our mandate. So as we continue to
17 roll out new chemicals and new products, they're in
18 better -- have less impact on the environment than
19 anything we had before.

20 I would like to point out that Halliburton
21 does not manufacture any of our chemicals. Very
22 few oil service companies do. The big chemical
23 manufacturers, Dow® and others like that, are
24 actually who -- Monsanto are the ones that make
25 these things.

1 So we continue to evolve, continue for
2 that improvement. That takes research and that
3 research is expensive. We spend hundreds of
4 millions of dollars a year in developing
5 competitive advantages. That's one of the reasons
6 we're a little sensitive to telling everybody what
7 we have, because once you do that, you lose that
8 competitive advantage and it's very difficult to
9 recover that investment. So to continue to evolve,
10 continue to go forward, we're a little bit
11 sensitive to disclosing everything that there is.
12 That's not to say we don't disclose.

13 One of the things that we're very proud of
14 here recently is the development of the CleanStim™
15 fluid formulation. CleanStim™ is actually
16 food-grade products that we can go out and use to
17 fracture a well.

18 Now, the problem always is, as you get
19 cleaner and better, it usually costs a little more.
20 So this is a more expensive system than what we've
21 currently been running, but it is available,
22 especially in the areas like a coal seam or
23 something where you're a little closer to the
24 groundwater than some of the deeper Bakken
25 formations and these where we're thousands and

1 thousands of feet away.

2 One of the other areas that we're working
3 on is not just chemical, but mechanical. We're
4 also looking for ways to eliminate chemicals
5 altogether. We continue to do this. We've come up
6 with an ultraviolet light that will allow us to
7 treat the water for bacteria because that's a very
8 important product you don't want to inject back
9 downhole. So we can use ultraviolet lights to kill
10 the bacteria, much like that water -- water spigot
11 you have in your office or something that has the
12 UV on it.

13 We've also introduced what we call the
14 ADP™ blender, the dry gel blender, which allows us
15 to eliminate the carrier fluids that are required
16 to -- and there are a lot of complications to a lot
17 of this, but the carrier fluids that we -- hauls
18 our water in to allow them to be dispersed, we can
19 now do that without that carrier fluid. So we've
20 eliminated the use of a lot of distilled
21 hydrocarbons and that -- by developing the ADP™
22 blender. We have three of those currently in
23 operation here in North Dakota.

24 Richard talked a little bit about
25 microseismic as a tool that's used to kind of

1 evaluate fracture height, and that's where he
2 showed the picture that showed the dots and said
3 that fracks grow maybe a couple hundred feet, not
4 thousands of feet. Well, microseismic technology
5 has been around for a while. It's not applicable
6 to every well because there are constraints on how
7 you can use it and where you can use it, but it is
8 a very accurate system.

9 I want to point out that nobody wants to
10 pump any more fluid than they have to or
11 anything -- anything that they don't want to put --
12 inject downhole if they don't have to, unless it's
13 making a better well, as John said before me.
14 Everything is about making a better well,
15 maximizing the recovery of the hydrocarbons that we
16 went down to get with that wellbore.

17 So with microseismic, one of the things
18 you can see, what this is is this is the
19 microseismics -- oop. Here we go. This is the
20 Barnett shale. These blue lines across the top
21 represent the depth of all the water wells across
22 this interval and this is -- I can't remember --
23 this is based on number of wells from depth --
24 deepest to shallowest and adjoining water wells
25 that are close-by it. So this is the maximum depth

1 of the water wells. There are some water wells
2 that are just about 1,200 foot deep.

3 And the microseismics, this shows the
4 breadth of the microseismic events associated with
5 all these frack jobs, and there are thousands of
6 frack jobs represented here. So here is the top of
7 any measurable microseismic activity at 4,000 feet.
8 So even the shallowest we get, we're still several
9 thousand -- 2,500 foot away from even the deepest
10 of the aquifers and in other cases even deeper.

11 And the other thing it shows is its
12 height. You just don't generate thousands of feet
13 of fracture height. If we could, that would be
14 beneficial in a lot of areas like the Piceance
15 Basin in Colorado where it would really eliminate
16 how much fracture work we have to do.

17 So with that, one of the last things and
18 one of the areas that we're very sensitive about is
19 water. We're trying to figure out -- we're
20 constantly trying to figure out how to reuse water
21 that we have previously used. In some environments
22 where there are what we call water fracks, that's a
23 lot easier to do because the chemistry is not that
24 complicated. And the Bakken, because of the
25 complexity of the formation, because of the

1 toughness of that formation and because it's an oil
2 reservoir, we have to generate a little more
3 conductivity.

4 And I love our terminology, and I watched
5 the slide and during the panel session, questions
6 and answers, if you have any questions on our
7 terminology, because as I watch it and listen to
8 it, I know what we mean, but I think we really have
9 a misrepresentation when we talk about reservoirs
10 and things like that and when I think back when I
11 first went into this business, what some of these
12 words meant, but -- you know, by all means, ask.

13 But the complexity of the Bakken requires
14 a different gelled fluid and there's a little more
15 chemistry to that, not that it's bad chemistry, by
16 any means, but it just takes a little more
17 viscosity to crack that rock and get the proppant
18 into it. So there's a little -- the water we can
19 use for that has got to be a little bit better than
20 just a water frack, but not that much better.

21 One of the other things that was brought
22 up by Richard earlier is the footprint. That's one
23 of the things that we also continue to work on and
24 develop. And we're working on especially
25 operations like the Bakken where we're now running

1 24 hours a day, we'll start looking at pad
2 drilling, things like that. We're looking at how
3 can we eliminate truck traffic, how can we reduce
4 truck traffic, get a lot of that equipment off the
5 road, go to central sites, bring things in a lot
6 more -- in larger bulk, things like that. So we're
7 constantly looking down that road, how can we get
8 higher horsepower out of our equipment so we don't
9 have to have as many trucks on location. The whole
10 industry continues to look towards that.

11 Disclosure. That's one of the hot issues,
12 obviously, and probably one that will come up here
13 today, but the Ground Water Protection Council
14 registry, the GWPC, went into effect here a couple
15 weeks ago. This is an example of what you can find
16 on it and, obviously, you can't read that here, but
17 this is a -- the registry is something that
18 Halliburton fully supports. The industry, by and
19 large, supports it.

20 We supply the information, again the
21 disclosure, discussions, the MSDS's that were
22 brought up by -- earlier, those are important.
23 That's for the concentrated chemicals. So when you
24 see some of these lists of 600 chemicals that are
25 used, it's only a handful that are used. They're

1 not all -- where you have to be concerned is when
2 they're in their concentrated form, and that's --
3 MSDS, that's all well regulated. That's OSHA, SARA
4 Title III, EPCRA, everything regulates that type
5 of -- or that content. So the disclosure is there.
6 You can type in your area and find out -- this is
7 the link right here, the fracfocus.org, that you
8 can go in and see what's in there. There's not a
9 lot in North Dakota just yet.

10 Finally, Halliburton's taking a proactive
11 stance. We have the Halliburton microsite on
12 hydraulic fracturing. If you go to
13 halliburton.com, it's right there on the front
14 page. You can go in there and you can find out
15 what is hydraulic fracturing, what's in the fluids
16 and a little bit about the green technology that
17 we're using.

18 You can go in and look at what's in the
19 frack fluids in a regional basis. And, for
20 example, North Dakota Bakken hybrid formulation, it
21 tells you what are we using in there and what kind
22 of the common usage of some of these things are.

23 So with that -- oops -- I'd just like to
24 end with, number one, hydraulic fracturing is a
25 safe process. When you saw the potential

1 contamination opportunities that Richard showed
2 earlier, none of those were associated with
3 hydraulic fracturing. It's well construction.
4 Well construction is key. We're continuously
5 trying to improve. Proper well construction
6 prevents a lot of these instances.

7 I also want to say it's well regulated by
8 the states, by -- specifically by the states and,
9 also, there are a lot of federal regulations that
10 regulate what we do.

11 So, again, I'd like to thank everybody for
12 your attention and I'll be glad to take questions
13 once the panel session is up and running.

14 Thank you.

15 (Applause.)

16 MR. WARD: Thank you, Mike. I appreciate
17 it.

18 Now we'll move into the people's view and
19 representing the tribes is -- is Fred Fox, and
20 his -- his role at the tribes is director of
21 energy. So, thank you, Fred. I'll get your
22 presentation up right now.

23 MR. FOX: Good afternoon. I'd like to
24 thank the Bureau of Land Management and Mr. Lonny
25 Bagley for inviting me to participate in the panel

1 today. My name is Fred Fox. I'm the Three
2 Affiliated Tribes administrator of the tribal
3 energy department. I was also the administrator
4 for the natural resources department for the Three
5 Affiliated Tribes and also the water resource
6 director.

7 My formal education is in the geological
8 sciences. I received my bachelor's degree from
9 Minot State University in university studies. I
10 then received my master's degree in management from
11 the University of Mary.

12 Today the presentation I will be giving
13 will be not only of the detrimental impacts on the
14 Fort Berthold Indian Reservation due to oil and gas
15 activity, but also the good that comes out of it
16 that the tribe has specifically been waiting for
17 for a long time. My presentation will basically be
18 on the background of energy development of the Fort
19 Berthold Indian Reservation, today's oil and gas
20 activity on the reservation, the environmental
21 regulations that apply to oil and gas activity,
22 also the water resources on the reservation that
23 are very, very important to the Three Affiliated
24 Tribes.

25 Also, cultural resource protection. That

1 is very important to us. The disturbance of our
2 cultural resources is very high to the Three
3 Affiliated Tribes of the Mandan, Hidatsa and
4 Arikara Nation.

5 I will also talk about the general impacts
6 of the oil and gas on Fort Berthold Indian
7 Reservation that we are very concerned about. I
8 will also discuss the proposed actions for
9 cumulative impacts today that we are very concerned
10 about. The Three Affiliated Tribes tribal
11 chairman, Tex Hall, sees this oil and gas activity
12 as a gift, but views it with cautious optimism.

13 The background of energy development on
14 Fort Berthold Indian Reservation. Fort Berthold
15 Indian Reservation contains 980,000 acres inside
16 the reservation boundaries. 530,000 acres are held
17 in trust by the federal government. Oil
18 exploration and production has been prevailing in
19 western North Dakota for over 50 years. Fort
20 Berthold Indian Reservation has largely missed out
21 on any significant activity until the last three
22 years. Outdated and burdensome federal laws and
23 regulations that pertain to Indian lands have
24 stymied real development on Fort Berthold
25 Reservation.

1 So we've waited quite some time to be a
2 part of the oil and gas and also the energy
3 industry as a whole. Delay caused enormous and
4 economic social harm to the Three Affiliated Tribes
5 and many Fort Berthold mineral allottees that once
6 again wait to emerge from the systemic poverty that
7 is so prevalent on all reservations.

8 Background on energy development also.
9 Seismic activity on the Fort Berthold Indian
10 Reservation was done in the late '70s and early
11 '80s, so we knew that there was potential for
12 development of oil and gas and our natural
13 resources on our reservation. On July 26 of 1997
14 Senate Bill 1079 introduced the 51 percent leasing
15 on our reservation.

16 What's so significant about this is that
17 before this bill was passed, it took 100 percent of
18 signatures from the landowners to get an oil and
19 gas lease on our reservation. A typical tract may
20 contain anywhere from 1 to 10 to maybe even
21 100-plus mineral owners in a tract of land, so to
22 gather all those signatures in the tract is very
23 cumbersome for an oil company to get a lease.

24 On December 7, 2006, Fort Berthold
25 Reservation started seeing, you know, a light at

1 the end of the tunnel. There was a BIA lease sale
2 that had 70 tracts leased. On November 15, 2007, a
3 BIA lease sale for 914 tracts then came on. So we
4 knew there that development of oil and gas was in
5 our sight. Landowners start receiving, you know,
6 the bonus payments and start reaping the benefits
7 of oil and gas leasing inside the reservation.

8 On December 13, 2007, the first well was
9 spud within trust minerals on the reservation. It
10 was the Hovda 1-09H. This lease was in October of
11 2005. So you kind of see it took about two years
12 for the permitting to get done and for the drilling
13 activity to begin on the reservation with trust
14 minerals.

15 On April 10, 2008, USGS assessment of the
16 Bakken shale in the Williston Basin was very good
17 news for the Three Affiliated Tribes and the Fort
18 Berthold Indian Reservation. We knew that we would
19 be a part of the oil and gas development inside the
20 state of North Dakota and also inside the Williston
21 Basin.

22 In 2008 of October five producing wells
23 were on trust minerals, so the time to get any
24 development inside the reservation was very slow,
25 and in that meantime there was a price of oil that

1 boomed to about \$150 a barrel. We missed that due
2 to the fact that the permitting process inside the
3 reservation and the federal red tape that hindered
4 development, many landowners didn't get to see it.

5 Fort Berthold Reservation activity today.
6 Total number of leased acres inside the reservation
7 on trust land, trust minerals, is 504,898 acres.
8 Total number of wells producing on trust minerals
9 is 117 wells. Total number of wells producing
10 inside the Fort Berthold Indian Reservation is 255.
11 Total number of wells drilling on trust minerals,
12 15 drilling rigs. Total number of wells drilling
13 inside the Fort Berthold Indian Reservation is 20
14 drilling rigs. Now, this is all the rigs that are
15 either on trust minerals or fee.

16 Environmental regulations that apply to
17 mineral agreement and drilling activities on the
18 Fort Berthold Indian Reservation. Oil and gas
19 activities on federal Indian lands must comply with
20 the National Environmental Policy Act of 1969, as
21 amended, the regulations of the Council on
22 Environmental Quality. 40 CFR Parts 1500 through
23 1508 are responsible for the development of oil and
24 gas.

25 Water resources. This is very, very

1 important to the Three Affiliated Tribes. Our
2 water is going to be here forever and that is one
3 of the main concerns for the Three Affiliated
4 Tribes and the Fort Berthold Indian Reservation and
5 all of the landowners.

6 Surface water. The most significant water
7 resource surface is provided by the Missouri River,
8 the Little Missouri River, the local minor
9 tributaries following the reservation which are
10 united within the reservoir of Lake Sakakawea.
11 Lake Sakakawea is 178 miles in length. It has
12 1,530 miles of shoreline inside our reservation.

13 Groundwater. The Fort Berthold
14 Reservation contains a number of groundwater
15 aquifers. Bedrock aquifers such as the Fox Hills,
16 Hell Creek, Tongue River and Sentinel Butte.
17 Aquifers such as the East Fork Shell Creek, Shell
18 Creek, White Shield, New Town and the Sanish.

19 Cultural resource protection on the Fort
20 Berthold Indian Reservation, like I said, is very
21 important. We do have a tribal historic
22 preservation office on our reservation and the
23 director is Elgin Crows Breast.

24 Section 106 of the National Historic
25 Preservation Act of 1966, as amended, requires that

1 projects needing federal approval or any -- or
2 federal permits be evaluated for the effects on
3 historic and cultural properties included or
4 eligible for the listing of the National Register
5 of Historic Places.

6 Potential impacts on the Fort Berthold
7 Indian Reservation. Soils, erosion, compaction and
8 contamination. We are very aware of the amount of
9 oil spills that are inside the reservation today
10 and we are very concerned with -- with the truck
11 traffic and the truck -- truck turnovers that cause
12 these oil spills.

13 Vegetation. The construction of the well
14 and access roads during ground-clearing activities.
15 On the Fort Berthold Reservation it was very
16 undisturbed before oil and gas activity. We had
17 the natural bluffs of Mandaree and the Badlands.
18 We had Lake Sakakawea. Natural places that were
19 very historic and very scenic to the Three
20 Affiliated Tribes and to our visitors.

21 Surface water, increased runoff and
22 sedimentation. With this year's amount of
23 precipitation due to the amount of snow that has
24 happened today -- you know, over this past winter,
25 it was very, very detrimental to the Three

1 Affiliated Tribes.

2 Groundwater contamination from drilling.

3 We understand this is very, very important. We
4 know that this is a possibility that can happen on
5 our Fort Berthold Indian Reservation, and it's very
6 much a concern.

7 Cultural resources. A discovery of
8 cultural remains or artifacts during its
9 construction. There's many a time that well sites
10 have been moved due to the fact there have been
11 cultural resources in place, so we would have to
12 move the well away from the cultural resources that
13 are contained in that area.

14 Road systems. Developed and unapproved
15 access roads throughout the reservation. The
16 reservation, as -- like I said, is very scenic.
17 The amount of roads we -- is -- is not very good.
18 We want to minimize the footprint on development
19 inside the reservation.

20 Wastewater. Production of wastewater and
21 disposal sites. This is very important also. The
22 disposal sites inside the reservation on trust land
23 right now is at zero, and we look very, very hard
24 into any disposal sites that are going to be
25 developed inside the reservation.

1 Proposed actions for cumulative impacts.
2 A programmatic environmental assessment. That is
3 currently being done right now with the Bureau of
4 Indian Affairs on the Fort Berthold Indian
5 Reservation, and there is currently public hearings
6 that will be held in the next two weeks on this
7 programmatic.

8 Fort Berthold oil and gas plan of
9 operations, which is currently being done with the
10 Bureau of Indian Affairs and the Three Affiliated
11 Tribes.

12 Operator and tribal meetings. Currently
13 right now we are meeting with the operators
14 individually and discussing their safety program,
15 their spill response program and their emergency
16 response programs as well. Because when an
17 incident does happen inside the reservation, we
18 would like to be ready for it.

19 Federal and tribal coordination. We
20 currently have a good friendship and a good
21 understanding in corroboration with -- with the
22 Bureau of Indian Affairs and also with the Bureau
23 of Land Management. We discuss oil and gas
24 environmental compliance and also emergency and
25 safety response.

1 Also, a coordination in planned energy
2 corridor transit system. Currently the Three
3 Affiliated Tribes on the Fort Berthold Reservation
4 has numerous oil and gas pipelines that are
5 currently being constructed inside the reservation,
6 and that is very, very important for the Three
7 Affiliated Tribes that this is planned in a way
8 that it is sufficient enough that it minimizes the
9 impact inside the reservation. We also look at the
10 electrical power lines, making sure that -- if this
11 is really what we want scattered throughout the
12 reservation. So there is also -- this is also
13 being looked at inside the reservation.

14 Oil and gas informative meetings. We do
15 informative meetings with the Bureau of Indian
16 Affairs and the Bureau of Land Management to
17 discuss the activity inside the reservation and the
18 potential impacts that have come inside the
19 reservation and with the Three Affiliated Tribes.

20 We also have state and tribal
21 coordination, discussing road safety, spill
22 response and regulation. Road safety is very, very
23 important to the tribal chairman and also the
24 tribal business council. There have been many,
25 many unwanted deaths inside our reservation due to

1 this.

2 Right here and final is Wanted:
3 Responsible development of oil and gas resources on
4 our Fort Berthold Indian Reservation.

5 This is contact information. I'd like to
6 introduce some of the department people inside our
7 energy department today that are here with us.
8 Mr. Ken Hall is sitting in the back. Also, he is
9 our deputy administrator. Jerome Smith is our
10 safety officer and also Delvin Rabbit Head is our
11 compliance officer.

12 So thank you, and I'd be happy to answer
13 any questions after our discussion. Thank you.

14 (Applause.)

15 MR. WARD: Thank you, Fred. Really
16 appreciate that perspective.

17 Is Myron Hanson in the house? Okay. The
18 last presentation that we're going to have before
19 the break is by Don -- oh, you are in the house.
20 Great. I'm sorry. Here is Myron, who represents
21 land associations and landowners.

22 MR. HANSON: Yeah. My name is Myron
23 Hanson. I live and farm at a little town in north
24 central Bottineau County called Souris. And I,
25 too, would like to thank Lonny Bagley and the

1 Bureau of Land Management for inviting me to
2 participate in this forum. A lot of our concerns
3 have already been voiced and I'll try and just give
4 a very brief overview of what our situation is.

5 You know, just a brief background
6 statement. We are a very young organization. We
7 got started, basically, late last fall as a group
8 of farmers and ranchers in Bottineau, Renville and
9 Mountrail Counties and a little bit into Williams
10 County that were becoming very concerned about the
11 size and the speed with which the oil development
12 was progressing in this state and the impact that
13 this oil development was having on our farms and
14 ranches. And because of some of the concerns that
15 we voiced, there are, you know, some individuals
16 out there that have, you know, tried to label us a
17 little bit as being anti-oil, and that is not the
18 case.

19 You know, as an organization, we support
20 the oil and gas industry and the prudent and safe
21 development of the natural resources in this state.

22 We are primarily a surface rights or
23 private property rights organization, and from that
24 perspective we feel that it is a little difficult
25 for us to comment on the downhole processes of

1 hydraulic fracking. We are not petroleum engineers
2 or chemists or geologists. And, you know, the
3 impact of the fracking process and what I believe
4 the geologists refer to as the stratigraphic column
5 in North Dakota is something that we just can't
6 speak to.

7 Our association believes that a far
8 broader impact and the more likelihood of risks to
9 the environment, including the contamination of
10 groundwater sources, exists in the surface
11 operations of the oil and gas industry.

12 As far as, you know, the surface impacts
13 of hydraulic fracking, you know, one that has
14 already been mentioned and which I would point out
15 is the most obvious is the impact on our county and
16 township roads. The amount of truck traffic
17 required to supply the materials for the fracking
18 process to a single well is just incredible. We're
19 talking about, you know, hundreds of thousands, if
20 not millions, of gallons of water and tons upon
21 tons of fracking sand and components. And the
22 cumulative effect of all these trucks has been
23 readily apparent, you know, to everybody out there.

24 And part of the conflict that would now
25 arise, you know, with the oncoming farming season

1 is our need to move large farm equipment down the
2 same roads that these thousands of trucks are
3 occupying, and this is a pretty serious deal
4 because if you have a tripled-up four-wheel-drive
5 tractor pulling a large air seeder with the seed
6 tank and the fertilizer tank and a liquid tank, you
7 don't back those things up and you don't get off
8 the road very easily. So there are going to be a
9 number of instances where this becomes a serious
10 safety concern.

11 The increased possibility of spills and
12 the recovery and disposal of the contaminated water
13 used in this process, the management of the
14 produced water from a well and the depletion of the
15 groundwater aquifers because of the huge demand for
16 water are additional concerns that we would have.

17 You know, the one aspect of the downhole
18 operations that I would address and has already
19 been addressed, you know, several times in this
20 presentation is the importance of the surface
21 casing and the cementing operation to maintain that
22 integrity of the well. You know, protecting this
23 initial point of contact between a wellbore and a
24 groundwater aquifer is, to state the obvious,
25 critical.

1 You know, as has been alluded to by the
2 gentleman from Halliburton, and that was one of the
3 sites I went to when I was trying to gain some
4 understanding of this process, it would be our hope
5 that the industry moves aggressively to develop
6 technologies that would move away from the use of
7 freshwater or at least seek to reclaim as much of
8 the used water as possible.

9 You know, in summary, I guess I would just
10 like to restate, you know, what we see as the basic
11 principles or impacts of the fracking operation
12 from our perspective. You know, one, the surface
13 impacts on our transportation infrastructure in
14 supplying the necessary materials to the well site;
15 and two would be the critical nature of making sure
16 that the cementing process for the wellbore and the
17 integrity of that wellbore, you know, coming up the
18 back side of it, is ensured; and then the third
19 would be the development of the technologies that
20 would move away from the freshwater to other
21 carriers for the sand and fracking components and
22 at least developing technologies for reclaiming as
23 much of this water as possible.

24 Now, I think it's critical that everyone
25 understand that water is essential to life. And in

1 a semiarid environment and that's, you know,
2 probably a, you know, funny term to use after this
3 winter, but western North Dakota is a semiarid
4 environment, and water is critical to the lives and
5 operations of farmers and ranchers in western North
6 Dakota. And we believe that its conservation and
7 its protection should be the primary concern to
8 everyone involved in the exploration activity now
9 taking place in this state.

10 And with that, I again would just like to
11 thank the BLM staff for extending this invitation.
12 We are, like I said, a relatively new organization
13 and this is an important educational forum for us
14 to learn more about this process and come to a
15 better understanding of the oil and gas industry in
16 the state.

17 Thank you.

18 (Applause.)

19 MR. WARD: Thank you, Myron. New
20 organization, but well-expressed concerns.
21 Appreciate your time.

22 So last on the list of comments is Dan
23 Nelson -- or Don Nelson, and he's going to have a
24 short presentation. Come on up, Don. Great.

25 And after Don's presentation, we'll go to

1 a break. Remember the three-by-five cards, and
2 then we'll go to the panel conversation. Great.

3 MR. NELSON: I'd like to thank the BLM for
4 holding this forum. I think it's a discussion that
5 needs to -- needs to happen. I guess I was tagged
6 for this speaking not too long ago, so it was short
7 notice as an environmentalist group. I'm
8 representing the Dakota Resource Council.

9 I guess if they want to call me an
10 environmentalist, that's okay, and I'm sure the
11 industry will basically demonize me for it.
12 However, I may say that other than Myron, I'm sure
13 he's probably not getting paid to be here, and
14 neither am I. They have one interest in mind.

15 I think I have a unique perspective on
16 this. I'm also on the BLM advisory council for
17 this region. I'm a farmer and a rancher, third
18 generation. We've had oil on our land since the
19 1950s. I'm also a mineral owner and a split
20 surface owner, which means I own land which has
21 either got federal minerals or someone else owns
22 the minerals under it. I'm also a public land
23 user. I graze cattle on public land. So I think
24 that gives me a perspective from many sides.

25 This is -- we are -- we are not here to

1 say we need to end hydraulic fracturing or the oil
2 industry. We all know how important it is to North
3 Dakota, especially in my area, in western North
4 Dakota. It has been for years. But it is about
5 responsible development and disclosure.

6 I would like to talk about four points on
7 this, and some of this will actually go over on
8 private land too. We're here for BLM land, but
9 they are intertwined. Number one is water
10 consumption; number two is disclosure and
11 disclosure by a proper government agency. I know
12 industry said they were disclosing, but it's what
13 they want to disclose. It's not regulated in the
14 way that they have to disclose it by -- by a proper
15 government agency. And also with disclosure comes
16 tracking. So if there is a problem, you can get to
17 it soon and you can fix the problem.

18 Bonding and reclamation. After this is
19 done, there's a huge footprint upon the land that
20 we've -- we've heard about, and that is something
21 that needs to -- especially on BLM, be taken care
22 of. There's a problem there.

23 And, lastly, I'd like to talk about who
24 regulates, federal versus state versus local
25 government, because -- one thing, too, that is

1 happening with BLM is a lot of -- there -- in North
2 Dakota there's a lot of intermingled private
3 with -- with federal land. Basically, it's Forest
4 Service land in North Dakota, and a lot of times
5 they are pushing them off onto the -- the oil
6 companies will come in and drill from the private
7 land into the federal land.

8 First, water consumption. The huge
9 amounts of water that are used is a concern, and I
10 think they said -- I heard Lynn Helms how much and
11 I did not get it down, but I thought it was 30
12 million gallons per day. Was that right, Lynn?
13 That's a lot of water. And I commend them for --
14 for some of the groups here now saying they'd like
15 to take it from surface water. We have advocated
16 that from the beginning, DRC, that it should come
17 from surface water because that can be recharged
18 much sooner than our aquifers. Some of our
19 aquifers take thousands of years to recharge. We
20 should not be depleting them.

21 And one other thing is I think in this
22 state most of our aquifers are going down. They're
23 not going up. They're not staying the same.
24 They're going down. So the added pressure from the
25 energy industry is going to make that go sooner.

1 One thing, too, we had some state agencies
2 here talking and they -- they say they -- they
3 regulate quite well. In some cases they do when
4 they're pushed. DRC's voice has been a good thing.
5 Even though they don't like us, this voice has to
6 be heard. It pushes a lot of changes within the
7 energy industry that over the years have come out
8 to be good. They now hold those regulations up and
9 say, "Look what we're doing"; but at the time, they
10 fought them.

11 The Water Commission had to be pushed by
12 the citizens of Alexander to not allow a water well
13 to be drilled with every oil well when the company
14 was proposing -- it was, I believe, 30-some wells.
15 So you have to push these state agencies and
16 federal agencies to get them to do the right things
17 many times, and that's the people of the state that
18 need to do that.

19 Proprietary information and disclosure.
20 One thing that I keep thinking about, they -- they
21 say these are proprietary information and they
22 don't want their competition to see it. I kind of
23 view it a different way. If they were to patent it
24 or whatever, those companies that have the best
25 fracking can sell it to the other companies, I

1 would think. And don't we want every single well
2 to produce the most amount of oil? If they're not
3 doing a good job of fracking, that's not -- that's
4 not good for anybody.

5 Another thing about disclosure is that
6 it's a -- it's a government transparency. It
7 should be disclosed to public. We're talking about
8 public land today, BLM land, so the public should
9 know what's in there. And the one thing about
10 disclosure which was brought up in one of the
11 presentations by -- by state, I believe it was, or
12 BLM, is then you have a way to trace it back. Who
13 caused the problem? Who's going to have to fix it?
14 It will be done in a timely manner, it will be
15 caught sooner and those problems can be fixed.

16 Another thing is air quality. We have
17 what they call off-gases from this. And while this
18 is going on, she's showing some photos here. Some
19 of those first ones, like that, are BLM land. It
20 isn't in this state, but that's what happens. Now,
21 North Dakota will be different, but I have heard
22 from five to seven wells per section, so there will
23 be a huge imprint upon the land. This is in
24 Wyoming. Some of the other pictures are not so
25 pretty pictures that industry likes to show you.

1 There are several studies on air quality
2 that I can list for you if you would like them, but
3 I'm not going to do it right now.

4 Third is bonding and reclamation. The BLM
5 has not raised their bonds in approximately 50 or
6 60 years. I think that by now we should be raising
7 that. I don't know of any other industry that
8 would be able to get away with being bonded what
9 was 50 years ago.

10 Also, on -- on disclosure, we have a paper
11 that we would surely give handouts. We've got some
12 here and we call it Coming Clean. I'll just
13 quickly list the nine points we believe that need
14 to come out of disclosure. One is Chemical
15 Abstract Service numbers, CAS, must be reported to
16 provide a unique identifier for each chemical
17 constituent used in a well, as well as the volume
18 and chemical concentration.

19 Two, all chemical constituents used during
20 the entire life cycle of oil and gas exploration
21 and development must be disclosed, drilling
22 chemicals, as well as those used in hydraulic
23 fracturing and any other method of well
24 stimulation.

25 Three, any protections for proprietary

1 information must be carefully defined with a clear
2 decision-making process and standard of proof and
3 must provide for the release of the adverse health
4 effects of each chemical that is kept secret,
5 release of proprietary information in the event of
6 a medical necessity and regular review and appeal
7 of proprietary designations.

8 Four, information must be disclosed to the
9 public.

10 Five, local landowners must be directly
11 notified of chemical use in advance, with
12 sufficient time before drilling or stimulation to
13 conduct baseline tests, like water tests.

14 A timely final report must be made after
15 drilling or stimulation with chemical constituents
16 actually used, pressures, fracture lengths and
17 heights, the type, source and quantity of fluid
18 used and quantity of fluid recovered.

19 Seven, reports must be filed on a
20 well-by-well basis.

21 Eight, in order to be effective and earn
22 the confidence of the public, a disclosure program
23 must be overseen by a regulatory agency with the
24 expertise and resources--this is huge. Most --
25 even the State, I think, would admit they can use

1 more resources--and authority to monitor and
2 enforce disclosure requirements, reorganize the
3 public health consequences and take action to
4 protect public health and the environment.

5 And, nine, penalties for failure to comply
6 with disclosure requirements should be sufficient
7 to encourage compliance.

8 Last, I'd like to talk about the federal
9 versus state versus local, I guess. I -- I think
10 the industry is pushing to have state regulatory
11 agencies do the work and not federal. I guess
12 that's fine if they do their job. As I gave the
13 example, it was citizens that usually have to push
14 state regulatory agencies to do their job. Most of
15 the state people came from the energy industry.
16 They're qualified, but if we do have people that
17 are going to be on the state level, I believe that
18 they should be elected. We should be given a
19 couple of choices for that job and they should be
20 elected, not appointed.

21 One thing I would say to the industry is
22 I've never -- we've been through several oil booms
23 in McKenzie County where I live and I've never seen
24 the public -- people that have -- live right in my
25 area and have been in the energy industry all their

1 lives that are complaining. I think you guys
2 are -- are having a bad PR and there's a lot of
3 push for a lot more local level to do -- do some
4 regulation. And if that happens, it's going to be
5 a lot harder for you to deal with than if you do it
6 right and responsibly.

7 I want to thank you for coming and I would
8 ask that you guys ask questions. This is your
9 time. This is a way for you to get your voices out
10 in this debate.

11 Thank you.

12 (Applause.)

13 MR. WARD: So we'll take a ten-minute
14 break and come back at 20 of the hour. And in the
15 time that we're on break, do get a card, formulate
16 your question or concern. And I'll ask the panel
17 members in ten minutes to come and take their
18 positions at the table and this is -- will be your
19 time.

20 Thank you.

21 (Recessed at 6:30 p.m. to 6:44 p.m.)

22 MR. WARD: And so the process is that we
23 have two microphones on the floor here. If you
24 want to voice your own question or your own
25 concern, we can line up behind the microphones, and

1 if there is no queue, then I'll take the cards.
2 And just to start out with right now, there are a
3 number of cards that pose, I think, a good question
4 and a challenging question. We've talked about
5 well integrity as being absolutely key and there is
6 a question here about the long-term guarantee that
7 that well integrity will be held in place.

8 One of the -- one of the other questions
9 from a landowner who had a water well pointed out
10 that a coal seam in her or his water well was
11 highly acidic and that coal seam succeeded in
12 corroding out the cement and the casing of their
13 water well, and the only way they could control
14 their water well was by putting PVC pipe in the
15 well.

16 So after everything is said and done and
17 after the -- after the gas is pumped out and it's
18 reaching its -- its sort of nadir days and Whiting
19 is no longer interested and they sell it off to
20 Billings and Billings sells it off to Acme and Acme
21 sells it off to -- what happens to our wells and
22 how can we be guaranteed that the tribe lands will
23 be safe and that these -- that we don't end up with
24 30-year-old casings bleeding into our freshwater
25 aquifer?

1 And I'll turn that over, I guess, to our
2 industry reps, to start out with, to -- to give a
3 technical answer.

4 MR. PANEITZ: And the question being the
5 long term?

6 MR. WARD: The long-term well integrity
7 from corrosion of casing, corrosion of cement. You
8 only have one barrier in many cases. Can we be
9 guaranteed?

10 MR. PANEITZ: Well, certainly, under the
11 long-term scenario -- all right. Certainly, under
12 the long-term production scenario, we are pulling
13 the pressure down in the wellbore. So, really,
14 off-reservoir fluids will flow down versus
15 expanding and growing outward into the aquifer
16 scenarios.

17 And we certainly also employ various
18 treatments to minimize our corrosion because we
19 have to maintain the pump in the wellbore, that we
20 can still produce the wellbore. If it's corroded,
21 we can't produce any oil.

22 MR. WARD: And Halliburton.

23 MR. EBERHARD: Yeah, I think the things to
24 keep in mind and in the case of the water well with
25 the coal seam and the acidic environment that it

1 was in, one of the things that we do is we spend a
2 lot of time and effort on cement design, on casing
3 design and the cements that we use, and I'd say
4 that's one of the differences between a water well
5 application and oil field applications is there's a
6 significant amount of research into cement
7 chemistry and what do we do. There's a lot of
8 additives for cement itself, expansive additives,
9 long-life additives and such. So it's a lot
10 different cement than what you have in a water well
11 where you just call the ready-mix up, they come out
12 and dump it down the back side.

13 We take those situations into account,
14 whether it's a salt zone that we need to protect,
15 corrosive zones. That's one of the reasons that we
16 put cement down there is to protect the casing from
17 any corrosive environment and we design the cements
18 accordingly. So we can adapt the cement to those
19 specific situations to protect the life of the
20 casing.

21 One of the other areas that gets
22 discussed -- we're supposed to limit these to two
23 minutes. Okay. I'll let that be the last part of
24 it.

25 MR. WARD: There are three questions here

1 that you're answering, so --

2 MR. EBERHARD: I think one of them was the
3 long life of the well. And one of the other areas
4 that we spend a lot of time is -- and there's been
5 discussion around this microannulus and backside
6 gas, things like that. Operators continually
7 monitor those -- their back side, their annular
8 pressure. We design cements that will prevent
9 microannuluses from happening. There's a lot of
10 things, again, we can do there, but well life --
11 the life of that well is one of the things that we
12 take into account.

13 There's -- on high-temperature
14 environments, we can add silica flour to the cement
15 that gives us extended life. It prevents the
16 retrogression of the cement. So there's a lot of
17 chemistry involved there to protect that casing
18 over the life of that well, decades.

19 And then, of course, proper abandonment is
20 key, and that's one of the other areas also where
21 proper cement design comes into play is when that
22 well is finally no longer productive and you have
23 to abandon it. That's where the operators need to
24 take care and do things right.

25 And then as far as who -- if somebody buys

1 it from somebody else and the bonding and such, I
2 guess John would be better to answer that one.

3 MR. PANEITZ: Yeah. Those bonds need to
4 get passed from operator to operator so that the
5 assuming company holds bonds with the -- with the
6 State. I mean that liability goes with the well.

7 MR. WARD: Thank you, gentlemen. This
8 next question goes to Lynn Helms and it sort of
9 builds on what -- what Mike alluded to. He
10 mentioned that it's best practice to measure the
11 pressure behind the casing strings and he mentioned
12 something about the bonds going with different --
13 and the question here is how is it that the various
14 state regulatory agencies coordinate with each
15 other and what are you doing to advocate for best
16 practices and more regulatory control to make
17 these -- these things that good operators do
18 mandatory?

19 So a two-part question: How do you
20 coordinate and how do you make sure that these
21 things become mandatory?

22 MR. HELMS: Well, I'll take the -- the two
23 parts. Regulatory coordination is handled in the
24 state of North Dakota through memorandums of
25 agreement or memorandums of understanding, and we

1 currently have MOAs with the Health Department,
2 which Dennis -- Dennis talked about, with regards
3 to when does the hand-off happen with a spill or
4 release incident, at what point do they become the
5 primary agency and we become the secondary agency
6 and what do we need to do in terms of reporting
7 them.

8 For example, in a release situation where
9 a spill is reported to us, it automatically gets
10 ported over to the Health Department's server and
11 web site and then they pass them on to emergency
12 management in the state of North Dakota.

13 We have an MOA with the State Water
14 Commission where we deal with protection of the
15 groundwater resources. So we've got a series of
16 those that have been negotiated between the
17 departments so that we've got a clear protocol with
18 regards to coordinating those regulatory efforts
19 and when we can rely on another agency's
20 jurisdiction.

21 Best management practices are a learning
22 experience, and what we have done since I became
23 director at the oil and gas division and then the
24 Department of Mineral Resources is we've gone
25 through a rulemaking approximately every two years

1 following each legislative session. So new laws
2 get passed in those legislative sessions that
3 require us to update the Administrative Code. But
4 even in the absence of that, we know that this is a
5 fast-moving, fast-growing industry that reinvents
6 itself about every ten years, and so we go through
7 a rulemaking process every two years where rules
8 are promulgated by the Industrial Commission.
9 They're put up for public comment. That -- all the
10 comments are collected and comment -- and responded
11 to and then they have to go through an
12 administrative rules committee process at the state
13 legislature before they can take final effect. It
14 takes 10 -- 10 to 12 months to put those new rules
15 into effect.

16 And so we're in a constant process of
17 updating those rules. And I encourage you to watch
18 for that because sometime midsummer, June, July,
19 there's going to be a notice coming out that the
20 oil and gas division is doing a rulemaking. And
21 you as a citizen of North Dakota have a right and a
22 responsibility to look at that and comment on those
23 rule revisions.

24 MR. WARD: Great.

25 I'd like to hear from the BLM reps and how

1 you coordinate and also comment on those rules or
2 what your rulemaking processes are because there's
3 a question here about how you coordinate and how
4 you make the best practices into mandatory
5 practices.

6 MR. WORDEN: Well, how we would -- how we
7 coordinate with the states, like I have limited
8 experience from the states I've worked in, but when
9 I was with BLM in Wyoming, we -- we coordinated and
10 went to the monthly oil and gas commission
11 meetings. We held regular meetings with them. We
12 had them -- you know, a quarterly call with them to
13 see what was going on. That's how we would
14 coordinate with our counterparts in the state.

15 As far as our rulemaking process, I
16 presented a little bit of that in my earlier
17 presentation. It's -- all rules are public
18 process. We have a proposed rule. We publish it
19 in the Federal Register. It's available for public
20 comment, 30 to 60 days typically. We receive the
21 comments, we address the comments and then we
22 publish it as a final rule if the comments are
23 satisfied. A lot of times that involves scoping
24 meetings, public meetings. We're looking for the
25 public's input on -- as we're making rules and

1 that's part of the process. There's that -- you
2 know, there's a comment period.

3 MR. WARD: Okay. This is a question to
4 Fred. You pointed out the benefits of natural gas
5 and oil drilling on tribal lands. You also were
6 concerned about the -- the spills on surface waters
7 and there was -- there was -- there were a lot of
8 images when our environmental friend showed --
9 showed what can happen. The question is how many
10 studies have been conducted on tribal lands to
11 define the impacts and to make sure that surface
12 waters are protected? You can broaden that out to
13 include the -- include all environmental
14 considerations, I suppose, Fred, if you would.

15 MR. FOX: Currently right now with any oil
16 spill or any undesirable event that does occur
17 inside the reservation on trust -- trust lands or
18 trust surface is immediately reported to the
19 emergency management office of the Three Affiliated
20 Tribes. They also coordinated efforts with the
21 Bureau of Indian Affairs on their natural resource
22 department with their environmentalists.

23 The studies that are currently being --
24 taking place right now, we do have a programmatic
25 environmental assessment that is currently being

1 done inside the reservation for future development,
2 and as -- inside federal lands all NEPA
3 requirements have to be followed and have to be
4 adhered to. So these are -- are currently being
5 done.

6 Right now with the Three Affiliated
7 Tribes, we are -- are implementing a department
8 specifically for safety and specifically for
9 compliance on any detrimental effects that happen
10 with oil spills or any undesirable events.

11 MR. WARD: Great. Thank you.

12 This next question goes to Don Nelson and
13 to Myron Hanson. And it's -- you pointed out in
14 your presentations that it's a -- you know, in our
15 democracy, it's a citizen's obligation to push for
16 rules to protect our common welfare, and the
17 question is sort of loaded. Do you think you'd
18 have better luck with the Feds in Washington or
19 here in the states? What is your approach and what
20 is your feeling about thriving for better controls?

21 We'll start, I guess, with Don and then
22 move to Myron.

23 MR. NELSON: For this forum, of course,
24 we're talking about BLM, so you have to be talking
25 federal. But as far as off the federal land, the

1 one thing about State is you have a little more
2 control. However, sometimes they, like I said,
3 come from the industry and don't like to listen to
4 us out on the land.

5 I guess I would rather -- the more local
6 you get, the better you are usually. So I guess
7 I'd probably say the State, but when I say that, I
8 think that the State has not been doing their job
9 here as far as we could slow this down. The State
10 could slow it down with what they're doing, and
11 that will help with incidents from happening. When
12 there's a mad rush, you're going to have accidents,
13 you're going to have things happen. And that oil
14 is going to be there. It's -- it's not going
15 anywhere. And I doubt if it's going to go down in
16 price. So it -- to me, this mad rush usually ends
17 up being detrimental.

18 MR. HANSON: I guess I would have to echo,
19 you know, basically the same sentiments as Donny.
20 We feel that the regulation and the enforcement is
21 probably best left to the people that are out here
22 on the ground, and that would be, you know, the
23 State.

24 Our organization, along with the DRC,
25 sees, you know, a little bit of lack of effort

1 sometimes from the State in the enforcement of the
2 regulations. But I will be the first to state that
3 I think that with the size and the speed and the
4 scope of this activity, that the State is now
5 overwhelmed and can't do the job that they're
6 supposed to do.

7 MR. WARD: Okay. I'm sorry. The
8 lights -- I didn't see you guys standing there.
9 Thank you for being patient.

10 Why don't we start with that mike -- that
11 mike there.

12 MR. JONATHAN BRY: Can you hear me okay?
13 Okay. This question is directed towards Lynn
14 Helms, but it would be nice to hear a response from
15 both Donald and Myron as well. I have a couple
16 comments and a few questions that are directly
17 related to that.

18 One of my main concerns regarding
19 hydrofracking in North Dakota is regarding the
20 health of the Missouri River. The Missouri River
21 is one of the most important natural resources we
22 have in the state. It is a place where we fish, we
23 recreate and get our drinking water from.

24 There are many wells and pipelines around
25 Lake Sakakawea and the tributaries and creeks that

1 run into the lake and the Missouri River.
2 Eventually, leaking fracking fluids will find their
3 way into the Missouri River if they're being used
4 in the Missouri River Basin, which is much of that
5 area, because everything in the basin ends up in
6 the Missouri River.

7 There have been already been more than 20
8 spills this spring due to snowmelt. There was a
9 saltwater spill into the lake near Keene and a
10 saltwater spill by Zenergy into the Charbonneau
11 Creek, which is a tributary of the Yellowstone
12 River which also ends up in the Missouri River.
13 This is just to name a few.

14 So what I'd like to know is why didn't the
15 oil companies realize that snowmelt would be a
16 problem in North Dakota, I mean, because it snows
17 here and we have floods here. And, also, I'd like
18 to know why wasn't a comprehensive plan for
19 cleaning up lake spills completed before we had a
20 spill in the lake? And I know you're working on
21 one now, but I would have thought that would have
22 been done a very long time ago. And better yet,
23 what will be done to make sure that there are not
24 any more spills into the Missouri River system in
25 the first place?

1 Thank you.

2 MR. HELMS: Can you help me remember all
3 those, Rich?

4 MR. WARD: You can stay at the mike --

5 MR. HELMS: All right.

6 MR. WARD: -- and help him remember.

7 MR. JONATHAN BRY: The question --

8 MR. HELMS: So let me begin with the
9 comment about the spills and -- and regarding the
10 snowmelt. We did have a record amount of snow in
11 North Dakota this year, but that should not
12 surprise people because it snows in places like
13 North Dakota. We also had a record number of wells
14 drilled in North Dakota.

15 And so in February and again in March our
16 department sent letters out to the operators
17 reminding them that there was going to be a
18 snowmelt and that they needed to check those sites
19 and facilities. And I would say in many, many --
20 in fact, in the vast majority of cases, that
21 happened. But in the case of now approximately 34
22 sites, that did not happen.

23 I am told by the policymakers that I work
24 for that we are going to take enforcement action on
25 those sites and that that will send a signal to

1 industry that that's not going to be tolerated in
2 the state and that we don't want to have that
3 happen in future winters.

4 With regards to saltwater and the --
5 what's going to be done to prevent around the lake,
6 we have a process where we now review all of the
7 drilling permits for proximity to surface waters.
8 The State Water Commission has provided us with a
9 map that shows buffer areas around perennial
10 streams and in those cases we are putting
11 stipulations on the drilling permits requiring
12 diking and extra protection.

13 The option, of course, for each one of
14 those sites is individual. And so there is an
15 option to use some other mitigating technology, but
16 that requires an on-site meeting with our field
17 inspector to determine that that alternative
18 mitigating technology will work. And so that's the
19 process that we're going through there.

20 I need to praise the governor and the
21 legislature. They are within days of approving an
22 Industrial Commission budget that's going to
23 increase our field enforcement staff from 15 to 25
24 and our overall staff at the oil and gas division
25 by 25 percent. And that's much needed in order to

1 catch up with what we're working with.

2 Finally, with regards to spill prevention,
3 I realize that industry is working on spill
4 prevention plans, but we have participated in a
5 number of drills with the Department of Emergency
6 Management on the state level regarding what
7 resources are available and what agencies and where
8 could they tap for knowledge and information in the
9 event of a spill into the Missouri River, and that
10 was largely driven by, of course, the Tesoro
11 refinery which sits right on the banks of the
12 Missouri River and has an excellent spill response
13 plan.

14 But there is within the Department of
15 Emergency Management a plan and a protocol, a
16 calling tree, a way to tap resources and respond if
17 we get a major incident in the lake. Is it
18 perfect? I doubt it. Do we need to sit down and
19 do another tabletop exercise? I'm absolutely
20 certain of it.

21 And I'm happy to hear that industry is
22 organizing to -- to build response -- a response
23 team that we can -- can build into that emergency
24 response plan.

25 MR. JONATHAN BRY: What will you do in the

1 winter if the lake is frozen? You know, you can't
2 take boats out. You can't take booms out, you
3 know, if there's a spill in the lake when it's
4 frozen over. I'm sorry. I just asked that
5 question. It just came to my mind.

6 MR. HELMS: The concept here, of course,
7 is with these permit stipulations. We're -- and as
8 Mr. Fewless talked, our goal here is to keep any
9 releases from getting any further from the wellbore
10 than necessary.

11 In the wintertime that's pretty easy.
12 Generally, fluids that are spilled, any streams or
13 creeks that run into the lake are dry in the
14 wintertime or it's pretty easy to build some type
15 of containment and stop any flow from reaching the
16 lake. Once it reaches the lake, obviously it's
17 frozen over and there's ice on it. So our goal is
18 to stop it before it gets to the lake.

19 A good example would be the Whiting
20 Roggenbuck situation. That facility or that well
21 site was built with dikes around it. The
22 compaction on those clay dikes was insufficient and
23 we now know that and we're talking about that.

24 So, you know, we're working with industry
25 so they can learn what it takes to build an

1 adequate dike, but they did have dirt-moving
2 equipment on that location ready to go in the event
3 of an off-location spill. They were able to build
4 a cofferdam in that little drainage just right
5 below the hill and stop the spill well before it
6 got to the lake.

7 Likewise, on the east side of the lake our
8 field inspector noticed a potential risk with a
9 well that was across the road from Lake Sakakawea,
10 but that there was a culvert right immediately
11 below the site. And so the entire time that they
12 were drilling and fracking there, they left a front
13 loader parked at that culvert and a pile of dirt
14 there so that they could shut it off within minutes
15 if necessary. That's the kind of preventive things
16 that we're implementing.

17 MR. WARD: Thank you. Here's a -- here's
18 a quiz question. 4.3 million barrels of reserves
19 in the Bakken, how many years, days, et cetera, of
20 U.S. current use would be covered?

21 I could stab at it. What is it, 40
22 million barrels global production, quarter of it is
23 the U.S. That's 10 million barrels. That's
24 approximately 4,000 days. Is my math wrong?

25 MR. HELMS: It's pretty accurate.

1 MR. WARD: It's a lot. It's a lot of
2 days. But that's a good question. The point is is
3 it worth it?

4 And this gentleman over here, so that mike
5 on the left.

6 MR. TONY CLARK: Thank you. My name is
7 Tony Clark. I'm chairman of the North Dakota
8 Public Service Commission. Not a question, but
9 just a comment for your record tonight.

10 In North Dakota the Public Service
11 Commission regulates electric utilities, natural
12 gas distribution companies, as well as the pipeline
13 siting for oil and intrastate natural gas. I also
14 have the opportunity right now to serve as
15 president of the National Association of Regulatory
16 Utility Commissioners, which is the association
17 that represents all of the state utility
18 commissioners in the country.

19 The comment that I'm providing is really
20 based on a resolution that our national association
21 passed and it's really applicable to this
22 particular public input hearing tonight. State
23 utility commissioners across the country are
24 watching intently hydraulic fracking, especially as
25 it relates to natural gas, and the reason is

1 because natural gas has become a critically
2 important fuel to America's utility consumers, both
3 on the electric side because natural gas is seen as
4 a bridge fuel which is relatively clean-burning in
5 relation to other fossil fuels, but also one that
6 pairs very well with some renewable things like
7 wind. So it's a very important resource from that
8 standpoint. It's also important in places like
9 North Dakota for residential heating and
10 affordable, reliable natural gas uses. It's very,
11 very important.

12 So utility commissioners across the
13 country in realizing how important hydraulic
14 fracking has been to -- to utility consumers passed
15 a resolution which basically supports state
16 regulation and state oversight of hydraulic
17 fracking, and the reason is really twofold. Number
18 one, we think it's best for the environment because
19 the state and local officials who have a detailed
20 knowledge of the geologic substrata in that
21 particular area are probably in the best position
22 to be able to protect the environment in that
23 particular area, but also because we think that it
24 avoids the chance that there may be some overreach
25 on the part of the federal government which could

1 clamp down on production of natural gas in a way
2 which would truly be harmful to America's electric
3 and natural gas consumers.

4 So with that, I'm going to stop my
5 comments, but what I would be happy to do, if it's
6 appropriate, is to just submit the resolution that
7 was passed by our national association to your
8 reporter.

9 MR. WARD: And building on that, it looks
10 like the Pickens transportation initiative is
11 probably going to get some traction in D.C. and
12 that would move gas into our transportation fuels,
13 which -- so bringing this resource to bear is
14 important, so thank you.

15 MR. TONY CLARK: Thank you.

16 MR. WARD: Here's a question, actually,
17 for the forum and BLM. And it's a question sort of
18 as a statement. We're talking about public lands
19 in a state where tourism, hunting and fishing are
20 hugely important to many of the state's citizens
21 and to out-of-town ambassadors, yet nobody from the
22 tourism industry or wildlife groups was invited and
23 nobody has mentioned hunting, fishing or tourism.
24 How can we have a meaningful discussion about oil
25 field development and fracking without any

1 discussion of these important components? Where is
2 Fish and Game? Why aren't they at the table? And
3 their 2010 oil impact report needs to be heard and
4 needs to be read.

5 So I'll turn that over to my BLM friends.
6 Where are the sportsmen?

7 MR. BAGLEY: Maybe I can answer that.

8 (Laughter.)

9 MR. BAGLEY: Lonny Bagley here at the BLM.
10 The invitation was sent out to a number of
11 folks through the newspapers. As far as panel
12 members, we kept them to the industry and some of
13 the key folks that we wanted to hear from. But
14 there are certainly opportunities for everyone to
15 comment and provide input into this forum, even if
16 they weren't on the panel. So we would be
17 interested in hearing from those folks.

18 But we did send out a number of
19 invitations across the state and also in Montana
20 and other places that -- we did get quite a wide
21 distribution of the announcement of this meeting.
22 So if there are any of those folks here who would
23 like to make comment, we would certainly entertain
24 that here tonight.

25 Thank you.

1 MR. WARD: And I should point out that the
2 forums in Arkansas and Colorado will include a
3 sportsman on the panel and on the dais. Okay.

4 So we'll go to this microphone here.

5 MR. BRETT NARLOCH: Is it on? My name is
6 Brett Narloch. I represent a public policy think
7 tank in North Dakota called the North Dakota Policy
8 Council, and I just -- I don't really have a
9 question. I'm just going to make a comment and
10 reiterate what Commissioner Clark said that
11 whatever regulations are necessary in the oil and
12 gas industry, we believe that the decisions are
13 best left with the state and local officials.
14 They, as Commissioner Clark said, have a more
15 intimate knowledge of the resources and the geology
16 and all of the other components and things that go
17 into making decisions that would regulate the
18 industry.

19 So we just want to, again, reiterate those
20 comments and hope that the State leads the
21 regulating efforts in those industries.

22 MR. WARD: Thank you.

23 This one goes out to, I guess, the
24 Halliburton rep and -- and Whiting. And it also
25 has a component of state governance. What percent

1 of the total profits from oil and gas development
2 in North Dakota stays in North Dakota?
3 Halliburton? Whiting? So it speaks also to the
4 severance tax, so we'll have the state reps.

5 MR. EBERHARD: Well, I sure don't have an
6 exact number off the top of my head, but as you
7 saw, I think, the -- the state payroll is 35
8 million and -- for in-state employees, and that's
9 just straight income. And then the tax revenue
10 that we pay was -- I can't remember the exact
11 number. Well, I've got it here. The state payroll
12 taxes was seventy -- 761,000. Property tax was
13 60,000. I'm not sure what our sales tax we spend
14 here is, but it's a substantial percentage.

15 When you look at an operation, the amount
16 of money that actually leaves the facility -- and
17 that's -- you know, there are a lot of things. We
18 have to purchase sand and the sand doesn't come
19 from North Dakota. It comes from east of here. So
20 there's a lot of expenses that go out, but our --
21 our number one expense are the people that work for
22 us. So it's a significant portion of our operating
23 cost. The facilities and the people stay here in
24 the state.

25 A lot of our supplies, we spent -- what

1 was it -- 19 million spent in the Williston area
2 with local suppliers. So there's a significant
3 number. You know, I -- I don't have an exact
4 number, by any stretch, but it's probably at least
5 30 to 40 percent of the revenue. That's not that
6 the rest of it's profit. It's just that you have
7 to buy materials that don't necessarily exist in
8 the state.

9 MR. PANEITZ: I guess for Whiting's share
10 of contribution to the state, we're certainly a big
11 pay -- payroll and severance taxes go directly to
12 the state. And as far as final profits, some of
13 that's going to be dependent upon how many people
14 are shareholders in the company. But, certainly,
15 payroll taxes and trickle-down effects of job
16 creation and other -- other work that contributes
17 to the economy.

18 MR. WARD: Lynn, the severance tax.

19 MR. HELMS: North Dakota has an 11 and a
20 half percent combined tax. We have a 5 percent
21 gross production tax, which is shared with the --
22 between the state and the counties, and then we
23 have a 6 and a half percent oil extraction tax,
24 which 60 percent of that goes -- let me see. I've
25 got to get these right. I better go the other

1 direction. 20 percent goes to the Water Resources
2 Trust Fund, 20 percent to K-12 education, and
3 60 percent into the general fund or now the Legacy
4 Fund. So that's split about 50/50. 30 percent
5 goes into the Legacy Fund, which will build a fund
6 for future North Dakota citizens, and about
7 30 percent into the general fund to support state
8 government. So it's shared across the entire
9 state.

10 MR. WARD: Okay. We'll go to this
11 microphone over here next.

12 AUDIENCE MEMBER: Has the North Dakota
13 Department of Health or the North Dakota Department
14 of Mineral Resources received any reports from
15 individuals who believe that they are experiencing,
16 on their land or in their homes, contaminated
17 water, soil or air and negative health effects
18 since fracking began nearby? And, if so, how are
19 these people being helped and when will that info
20 be released to the public?

21 MR. WARD: So, Dennis, can you answer that
22 and then we'll move, I guess, to --

23 MR. FEWLESS: There is one person up in
24 the oil patch area that we have been working with
25 for at least the last year. You know, I can't talk

1 specifics about that, but we have been working with
2 that individual that I am thinking of with taking
3 air samples, soil samples, water samples and are
4 still working with that person to see if we can
5 solve their problem.

6 But we -- we haven't found anything in our
7 sampling yet or a source that could be causing the
8 issues.

9 MR. HELMS: Our recent records and so --
10 we keep a list of all of those types of complaints
11 that come into the oil and gas division, and I
12 believe that we're now at six or seven individuals
13 who have brought to our attention concerns about
14 health effects, whether it was from the possibility
15 that chemicals were being mixed into water on a
16 location and -- when they walked by.

17 In every one of those cases we have
18 responded with a field inspector going to the site
19 and then we've also turned the information over to
20 the Health Department since they are the regulators
21 of air quality and water quality. I know that in
22 every one of those cases they have responded with a
23 fieldperson going to the site and discussing the
24 matter with the individual, and I only know of one
25 of them that has gone into the long-term phase that

1 Dennis has talked about.

2 You asked the question about revealing
3 that information to the public. That is personal
4 information which falls under HIPAA regulations,
5 and so once an individual gets down -- that far
6 down the road to where they are alleging health
7 problems as a result of oil and gas operations and
8 once the Health Department responds and begins to
9 work with them on blood tests and all that sort of
10 thing, that's highly confidential information. I'm
11 not sure it will ever be made public in that venue.

12 The -- the complaints and the spill
13 reports will eventually be made public if it
14 doesn't end up in -- in one of those types of
15 situations where, you know, it's long term working
16 with an individual on health problems.

17 AUDIENCE MEMBER: Would those people -- do
18 you think those people would feel that you are
19 helping them, as you say you are? If I were to ask
20 them, would they say, "Yes, we're being helped.
21 People are looking into it. I feel taken care of
22 by my state"? What do you think they might say?

23 MR. WARD: Dennis?

24 MR. HELMS: I'm hoping Dennis responds to
25 this as well. I think it's likely that they would

1 answer, "No, I don't think I'm getting the help
2 that I want." Are they getting -- do I believe
3 that they're getting a response from our agency and
4 a response from the Health Department? Yes, I
5 believe they are. But I don't -- I don't know that
6 they would answer -- I think they would probably
7 not answer, "Yes, I'm getting the help I want."

8 Dennis, you've worked with those cases.

9 MR. FEWLESS: Right. And, you know, since
10 we -- we haven't found any elevated levels in any
11 of our samples, yes, I would probably say that they
12 don't feel satisfied, but we're not sure where else
13 to go to determine the source that's causing their
14 health effects.

15 MR. WARD: Dennis, this is a related
16 question and I think it's a good time to bring it
17 up. We've seen on the news of cattle that can't
18 drink water, of aquifers and -- that -- where
19 humans can no longer drink it. And if this were to
20 occur in North Dakota, we're saying it hasn't, but
21 if it were, because the boom is starting, who will
22 pay to clean this up and who will pay for the lost
23 water, and how would it work if you did find a
24 correlation between contamination and illness and
25 how -- what would -- what would -- you know,

1 suspend disbelief and pretend that you actually did
2 find a connection. What would happen?

3 MR. FEWLESS: Well, I guess, first, when
4 you have a situation where you have sick animals or
5 a contaminated aquifer or whatever, you do a full
6 delineation and determine what the -- what the
7 contaminants are and then who the potential sources
8 are and who the responsible party would be. If you
9 have a -- an extreme situation like this, there has
10 to be a responsible party.

11 So that's our process of evaluation and
12 then going into the -- the legal aspect of
13 determining the person to clean it up.

14 MR. WARD: Okay. We'll have a question
15 from this --

16 MR. ANDY PETERSON: Thank you.

17 MR. WARD: Yes.

18 MR. ANDY PETERSON: Is this on?

19 MR. WARD: Yeah.

20 MR. ANDY PETERSON: Thank you. My name is
21 Andy Peterson. I'm the president of the North
22 Dakota Chamber of Commerce. Question for
23 Mr. Helms, if I could.

24 Lynn, I've found you to be a fairly
25 straightforward and, by reputation, honest person.

1 Given all that we've talked about tonight with
2 federal regulators and state regulators, is there
3 anything at all that the federal regulators could
4 add that your department could not?

5 MR. WARD: I take that as a no.

6 MR. HELMS: Well, I'm thinking for a
7 minute --

8 MR. WARD: Okay.

9 MR. HELMS: -- since it's a vast code of
10 regulations. We have a very positive relationship
11 with the Bureau of Land Management in the state and
12 we coordinate our efforts on almost everything.

13 I think the one area where we really rely
14 on them is with the Indian trust lands. The State
15 of North Dakota has very limited, if any,
16 jurisdiction over many matters that happen on the
17 trust lands, and the Bureau of Indian Affairs and
18 the Bureau of Land Management are the trust that is
19 intended to protect those individuals and to look
20 after their correlative rights. They show up at
21 every one of our hearings.

22 When a pooling is going on that's going to
23 impact Indian minerals, they comment on that and
24 that gets incorporated into the agreement, and then
25 we -- we complement each other -- for example, if

1 we're overwhelmed and can't put a field inspector
2 on a plugging and abandonment operation, a BLM
3 field inspector will -- will go on that site and
4 witness the plugging and abandonment.

5 So I think there is an area and I think
6 it -- it -- dominantly, it is the Indian trust
7 lands where they have the responsibility, they have
8 the jurisdiction. We don't, and we really need to
9 coordinate our efforts there and make sure we're
10 protecting the rights of our Indian tribes and the
11 allottees.

12 MR. WARD: Fred, would you like to
13 comment?

14 MR. FOX: Currently right now, you know,
15 there is current collaboration with the State and
16 the tribe and the Bureau of Indian Affairs and, you
17 know, it does have a lot of, I guess, collaboration
18 and meetings that take place with any type of an
19 emergency response or any type of a spill response
20 that has taken place.

21 Like Lynn had said, you know, Bureau of
22 Indian Affairs and Bureau of Land Management do
23 have the trust responsibility, but with that, there
24 comes the federal regulatory red tape that is in
25 place with all federal Indian trust lands.

1 MR. ANDY PETERSON: Okay. Thank you.

2 MR. WARD: And we'll have a question,
3 then, from this microphone on the right.

4 AUDIENCE MEMBER: One of the major
5 concerns brought up today has been about the huge
6 amount of water that's being used in hydraulic
7 fracking. This is, I guess, to the Halliburton
8 representative.

9 There is a company in the process of
10 fracking that does not use water. It's called
11 GasFrac and it uses liquid petroleum gas which can
12 be 100 percent recoverable; virtually 100 percent
13 of the LPG can be recovered. Is there some reason
14 why that process has not been instigated in North
15 Dakota as a water concern or -- when there is a
16 water concern?

17 MR. EBERHARD: The GasFrac process, as you
18 said, uses liquified propane and it's -- in order
19 to do that, it has to be a pressurized system to
20 just -- you know, much like your propane tank on
21 your barbecue. So when you start looking at the
22 volumes that it takes to treat these long laterals,
23 you're looking at a heck of a lot of propane out
24 there, and these are contained systems. In order
25 to get the proppant in there, you have to do it

1 under the pressurized system also. So it's a very
2 cumbersome process to use and, I mean, there are
3 safety issues, of course, when you start looking at
4 propane and the volumes that you will have out
5 there.

6 There's been a trial in the Marcellus back
7 East of that process and the wells just do not
8 perform as well. They're still working on it over
9 there, but by and large, you're -- now you're
10 looking at propane lines. The volumes that you're
11 talking about are significant. It takes a volume
12 of something to generate the fracture geometries
13 that are used, that are required to produce these
14 wells.

15 So if you look at the volume of water
16 that's out there, you're looking at a similar
17 volume of, say, propane. So, boy, that's a
18 pretty -- it's a lot. So it really -- it's just --
19 it's not a very good application for that process.
20 Does that answer your question or --

21 AUDIENCE MEMBER: Well, I -- we'll leave
22 it at that.

23 MR. EBERHARD: Okay.

24 MR. WARD: This is a related question.
25 There's been a lot of news about diesel being used

1 in frack jobs, and the one area where -- where the
2 Clean Water Act does regulate from the EPA is the
3 use of diesel in a frack job. So from 2005 to 2009
4 what is the status and the position of using diesel
5 in frack jobs and will there be permits required in
6 the future and have permits been issued here in the
7 state for diesel frack jobs?

8 MR. EBERHARD: Do you want to answer the
9 permits?

10 MR. HELMS: You talk about the use and --

11 MR. EBERHARD: I'll talk about the use.
12 Okay. The -- at this point, Halliburton is
13 diesel-free. And when you say diesel, it's always
14 the context in which the term is used. Diesel
15 was -- for example, we may have had an additive
16 that was added at a gallon per thousand for the
17 frack fluid and it had a quarter gallon of diesel
18 in it. So do you say did you use diesel to frack
19 that well? Well, yeah, there was some diesel in
20 there, but it wasn't a diesel frack. In the old
21 days we had -- there were actually frack jobs that
22 were just all hydrocarbon.

23 So the -- that was kind of the gray area
24 of that rule was was it a hydrocarbon frack or was
25 there an additive with a diesel component to it,

1 and that's where a lot of the discussion right now
2 between 2005 and 2009 is out there.

3 I mentioned the ADP™ blender that we used
4 and such. One of the carrier fluids for the water
5 that's used was diesel years ago. We eliminated
6 that in -- in, yeah, 2005 as part of the EPA
7 memorandum of understanding that we signed. So as
8 far as Halliburton goes, we were out of the diesel
9 business in that context, but there were still one
10 or two additives that had it as a small component.
11 Those have been eliminated also.

12 So I guess when you -- when you hear that
13 diesel was used, that would be less than a cup in a
14 thousand gallons of fluid.

15 And keep in mind, this fluid's being
16 pumped into oil-bearing formations. It's not -- I
17 mean there's a lot worse stuff -- I don't want to
18 use that term.

19 (Laughter.)

20 MR. EBERHARD: Can you back that up? I'm
21 watching her type everything I say here and it's
22 kind of -- she just typed that.

23 (Laughter.)

24 MR. EBERHARD: Are we good to go?

25 MR. WARD: So -- and then the question

1 about regulation of diesel, diesel frack jobs.

2 MR. HELMS: We currently statewide in the
3 state regulations don't have any prohibition
4 against the use of diesel as a frack fluid.
5 However, we've been doing a lot of research in this
6 area, especially in the situations where we had
7 unplanned releases, to find out how much, and if
8 any, diesel was involved in the frack job.

9 There were approximately 12 frack jobs
10 pumped in the '07-'09 time frame by a company up in
11 Divide County that used diesel as a dominant fluid.
12 It doesn't work for many of the reasons that
13 propane doesn't work and so that's been abandoned,
14 and I'm not aware of any companies that are using
15 it at this point in time. We do ask the question,
16 but we don't have rules against it.

17 One of the reasons it doesn't work is that
18 what we find out with our frack flowback water is
19 it becomes very salty very quickly. And so when we
20 flow two and a half million gallons of water back
21 out of one of these frack jobs, we find that that
22 freshwater has taken up and brings back with it
23 about 5 million pounds of salt. It's a very salty
24 rock that we're fracturing and we get a lot of
25 stimulation value from that salt removal. So

1 hydrocarbon-based fluids like diesel are far less
2 effective and they're not as safe and they haven't
3 been used since 2009.

4 MR. WARD: Okay. We'll take a question --
5 whose turn is it -- from this mike here.

6 MS. SANDY CLARK: Good evening. My name
7 is Sandy Clark. I am public policy director for
8 North Dakota Farm Bureau. Don't have a question
9 this evening, but Farm Bureau just wanted to be
10 able to go on public record as supporting the
11 ability and the opportunity to -- to do hydraulic
12 fracturing in North Dakota.

13 North Dakota Farm Bureau is a state farm
14 organization. We have 27,000 members. And we also
15 believe that the State of North Dakota is in the
16 best position to regulate the use of hydraulic
17 fracturing.

18 North Dakota Farm Bureau also supported
19 two bills this legislative session, House Bill 1216
20 and House Concurrent Resolution 3008 in the current
21 legislative session, to exercise states' rights in
22 regulating hydraulic fracturing.

23 We believe that agriculture, oil
24 development and public use of BLM lands can coexist
25 in western North Dakota and other states. And Farm

1 Bureau has always supported the multiple-use
2 concept.

3 Both agriculture and the energy industries
4 create new wealth in the state of North Dakota.
5 And so we think the development of oil -- the oil
6 industry in the state will continue to increase and
7 reduce this country's dependence on foreign oil.

8 The use of hydraulic fracturing to develop
9 oil production on BLM lands is an important
10 component to the oil industry in North Dakota.

11 And, again, we thank you for the
12 opportunity to appear here this evening.

13 MR. WARD: Thank you.

14 Okay. We'll go to the next mike.

15 MR. DALE PATTEN: Good evening. My name
16 is Dale Patten. I'm a McKenzie County Commissioner
17 in Watford City, and I've got a few comments and
18 then a couple of questions.

19 First of all, I appreciate Donny being up
20 there. He's one of our residents. And we agree
21 with him on a lot of the things that he talked
22 about.

23 We like to push our state agencies. Lynn,
24 if there's any agency that we haven't pushed, let
25 me know and we'll add them to the list so that we

1 can make sure that we're covered there. But we've
2 also found there's been a very good working
3 relationship with the state agencies. They're very
4 effective. They're very responsive. They have the
5 most experience and the most knowledge about the
6 issues and they are the quickest in their reaction
7 time, both in a crisis and a noncrisis situation.
8 So we appreciate that about our state agencies. We
9 believe at the commission level that they are the
10 proper place for the fracking regulation to take
11 place.

12 McKenzie County has been very aggressive
13 in pursuing the use of surface water, specifically
14 Lake Sakakawea water, to use in the fracking
15 process. We believe it's the highest quality and
16 we want to protect our groundwater sources for our
17 local residents for their livestock and domestic
18 use.

19 We also have a very active dust control
20 program on our roads and that keeps getting
21 expanded every year, and that is one of the things
22 at the commission level we try to help mitigate,
23 some of the effects of the truck traffic that are
24 taking place in our -- in our county.

25 With those things in mind both at the

1 county level and at the state level, we think that
2 the regulation is best left in those hands.

3 And my question is going to the BLM and
4 the question, basically, is what do you think that
5 the federal regulations -- or federal regulators
6 would bring to the table, specifically the EPA,
7 regarding fracking regulations that isn't being
8 covered much more responsibly at a local level?

9 MR. WORDEN: I think I can speak for the
10 Bureau and the Department of Interior. I think
11 we're here not to decide on regulations. We want
12 to hear what the -- the people of North Dakota have
13 to say.

14 As far as the EPA goes, I can't speak for
15 what the EPA does. I know they're in the middle of
16 the first year of a four-year study on hydraulic
17 fracturing. Where that goes, I don't know. We do
18 cooperate with them as another federal agency, but
19 as far as where that's going to take us, I don't
20 have an opinion.

21 MR. WARD: I have a technical question for
22 the panel, and I'm going to combine some -- some of
23 the cards here for the purpose of time. In North
24 Dakota are we going to experience the kinds of
25 ozone alerts that they've experienced in Wyoming?

1 Related to this question, we know that
2 frack -- frack water brings up a lot of gas with
3 it. How do you manage the gas when it gets to the
4 surface and how do you manage other impacts
5 associated with the frack water and can there be a
6 concentrated effort on reclaiming the frack water
7 and air quality to reduce and to recycle, to reuse
8 and reclaim?

9 And so I guess we've got a two-part
10 question here. It's about frack water reuse, as
11 well as air quality issues associated with
12 fracking. And I think this is a pertinent question
13 because there's a recent study put out by Cornell
14 University where fugitive emissions were raised as
15 a major issue in the -- in this -- in this
16 development. I think the conclusion of the Cornell
17 study was wrong in that gas is worse than coal.
18 However, a similar conclusion that probably is
19 right is how can we implement best practice to keep
20 the gas in the pipe and not lose it because it's a
21 resource of the environment? So it's kind of
22 combined into these two questions.

23 So I guess I'll turn it to industry and
24 then to -- well, to the oil company and then to the
25 service company and anybody else who wants to pitch

1 in on that.

2 MR. PANEITZ: Well, certainly, the best
3 practice is to avoid it. And for our operations in
4 Sanish field, we will -- there may be some -- a few
5 hours where that gas is brought back and flared,
6 but for the most part we have a gas plant in place
7 and that gas is put down the pipeline and sent to
8 the gas plant and sold.

9 MR. WARD: Are there cases where it's
10 vented?

11 MR. PANEITZ: No. Because it's more or
12 less a safety issue.

13 MR. WARD: Safety.

14 And dealing with other operators, do they
15 vent?

16 MR. EBERHARD: Yeah, I'm in no position
17 to -- that's a different side of the business than
18 we're --

19 MR. WARD: Okay.

20 MR. EBERHARD: -- we're involved in.

21 MR. PANEITZ: I think the safety issues
22 would prohibit most operators from venting.

23 MR. WARD: Okay. Now answer the same
24 question with respect to the flowback water, water
25 reuse, recycling, you know, resource recovery.

1 MR. PANEITZ: As far as reuse of flowback
2 water, we are looking at it. There's some minor --
3 there are some technologies out there for recycling
4 the lower TDS waters, that you can then remove some
5 of the salt and/or blend it with freshwater to
6 reuse a portion of your water. But where it
7 becomes very impractical and very costly right now
8 is with the high TDS water, such as 200,000-plus
9 concentrations. Those technologies are really just
10 not out there at the present.

11 MR. WARD: That's what you get here,
12 200,000-plus?

13 MR. PANEITZ: Yeah.

14 MR. WARD: So you have a little water with
15 your salt, huh?

16 MR. PANEITZ: That's right.

17 MR. WARD: Any other comments on the
18 flowback water and flowback water -- so the best
19 practice, then, is to reinject flowback water and
20 produce water; is that right?

21 MR. HELMS: Yes. And I just want to
22 reiterate something I said in my prepared remarks,
23 Rich, and that is that in North Dakota only in
24 emergency situations does that flowback water go in
25 a pit. It's collected in tanks in North Dakota.

1 We don't allow venting of the gas. It has to be
2 flared. And as soon as there's enough gas to
3 support gathering it and putting it down the
4 pipeline where the -- where the gathering system is
5 mature, it goes into the gathering system.

6 About 20 percent of the water is low
7 enough total dissolved solids that it can be reused
8 or recycled. The remaining 80 percent is saltwater
9 and goes into that Dakota formation, goes to a
10 saltwater disposal site.

11 I don't anticipate the ozone problems that
12 Wyoming experienced. They have a huge problem with
13 temperature inversions out there in the Pinedale
14 area, but we can occasionally get those here.

15 We recognized early on that we had a
16 problem with volatile organic compounds being
17 vented off the tank batteries. The Health
18 Department -- and Dennis can comment on this more
19 than I can probably, but he's a water guy over
20 there, not an air guy, so -- but the Health
21 Department and industry formed a task force, got on
22 it very quickly, and so those tank vapors are being
23 collected and compressed and put into the sales
24 line whenever possible. If not, they're collected
25 and incinerated. So I think we've headed that off

1 and I don't expect to have ozone problems.

2 MR. WARD: I think you should write a
3 reply to that Cornell study. It's an awful lot of
4 apocryphal information in that and it's not
5 helpful.

6 Let's go to this microphone now.

7 MR. DUANE DeKREY: Thank you. I'm Duane
8 DeKrey, a state legislator from North Dakota, and I
9 had a comment and a question. And my comment was
10 Farm Bureau already brought up two bills and the
11 resolution that we passed this year, and I'd like
12 to give that to BLM to take back because we -- the
13 resolution was to go to the EPA, and I can see from
14 tonight it should also go to BLM. So I'll give you
15 that.

16 My question is in North Dakota now,
17 25 percent of our revenue stream is from oil and so
18 it's a pretty important industry to North Dakota,
19 and we hear a lot of rumblings coming out of
20 Washington from, you know, the EPA and the BLM on
21 the topic of fracturing. And when I'm here
22 tonight, I hear that the BLM is working on
23 fracturing.

24 My question is -- and I think it was
25 partially answered earlier, but how closely are the

1 EPA and the BLM working on fracturing, because I
2 know in North Dakota what would happen if we had
3 two agencies who were working on the same thing,
4 we'd cut their appropriation in half and tell them
5 to get together. But --

6 (Laughter.)

7 MR. DUANE DeKREY: So I'm kind of
8 concerned with the first part of your answer was
9 that you're maybe not talking that much because I'm
10 kind of getting the impression from this meeting
11 that the BLM is, you know, pretty happy with
12 fracturing and thinks it's pretty safe, but that's
13 not what we're hearing out of Washington on the EPA
14 side. And so how much coordination are the two
15 agencies doing?

16 MR. WORDEN: Your question is how much are
17 the two agencies coordinating. As another federal
18 agency that deals with oil and gas production, we
19 are -- we work with our federal agencies. I can
20 say that we don't meet regularly, but we do have
21 input as another federal agency that would be
22 affected by the -- by any rule or process that they
23 would consider.

24 MR. WARD: Thank you.

25 And we'll have a question from the

1 microphone on the left.

2 MS. MARIE HOFF: My name is Marie Hoff.
3 I'm a member of Dakota Resource Council. I'm also
4 currently serving as the chair of our board.

5 And there's been a lot of technical
6 discussion here today. I have a rather more global
7 question that also touches on some of what I might
8 call the human side of what's going on in our
9 state. I come from -- my professional background
10 is social services and so I have an interest in the
11 human aspect.

12 I think it would be very hard to
13 overestimate the total impact of the current oil
14 and gas industry on the whole state of North
15 Dakota, but particularly the western and
16 northwestern part of our state, in terms of not
17 only the physical aspect of our state, the water
18 and the soil and so on, but -- and it was mentioned
19 here earlier by other people about having
20 interests, such as wildlife and tourism and so on,
21 represented here, and I would certainly support
22 those concerns and understand that in any public
23 forum only so many sides can be heard.

24 But my question, really, and a comment to
25 explain it is with regard to the current pace of

1 the oil and gas development in North Dakota, is
2 what is the big hurry? It's not as though our
3 state is broken and, yet, we have all this
4 seemingly sense of we've got to get this stuff out
5 of here as fast as we can; whereas, the planning
6 that's needed even for, say, the physical
7 infrastructure for roads, that the farmers and the
8 ranchers are not consulted and given sufficient
9 time to have some input and how is this going to
10 affect them on their land.

11 The companies must know how many people
12 you typically employ on any given oil exploration
13 project. And why isn't there planning going on
14 with the local communities about how much housing
15 is needed? Someone made some somewhat passing
16 remarks earlier about the impact on -- on local
17 water and I think what they were implying is the
18 issue of even the sewage disposal and local water
19 treatment and so on in local communities.

20 I also know that there's -- in many
21 countries around the world when huge numbers of men
22 go into work fields where there are, excuse me, no
23 women around, you know, they're setting up the man
24 camps for people to live in. The news out of the
25 Dickinson area is that the domestic violence has

1 really exploded in that part of our state. And I
2 know as someone who's worked in child welfare that
3 child abuse is also part of domestic violence in
4 those cases where there are children in the
5 situation and children suffer for the rest of their
6 lives when they are abused.

7 And why is the State not slowing down this
8 process so that you can plan with your local
9 communities that there's housing, that there's
10 sewage, that there are schools, that there are
11 social services, and et cetera? I mean I don't
12 have to talk about what all of those needs are.
13 You know what they are. But why are we in such a
14 hurry?

15 This oil, as you say, is going to be
16 there. The state is not broken, and I really do
17 not believe that the State of North Dakota has
18 enough resources in -- excuse me, in place to be
19 able to adequately regulate and monitor what's
20 going on in the situation.

21 So why are we not pacing it at the pace
22 that we can actually monitor and regulate it and
23 provide the -- the physical and the social
24 infrastructure for this?

25 Yeah, so that's kind of my question and

1 comment.

2 The last thing I'd like to say is there's
3 been a lot of commentary here this evening that
4 touches on the idea of local versus national
5 ability to monitor and manage our natural
6 resources, and particularly with respect to the
7 role of the EPA, and I would just like to say that
8 although I -- since I belong to a grassroots
9 democratic organization, we certainly support and
10 recognize the need for local control and the local
11 people usually do know their own situation the
12 best. I think the farmers and ranchers up here
13 really are witnesses to that, but at the same time
14 we are part of one country. And I do believe that
15 there is a very significant and legitimate role for
16 the National Environmental Protection Agency to
17 regulate the air and the water of this entire
18 country and that they should be significantly
19 included and not be bad-mouthed, for lack of a
20 better word, about the role of the national
21 government in securing our safe air and water.

22 Thank you.

23 (Applause.)

24 MR. WARD: Do we need to respond to that?
25 I don't -- I think that that was well spoken. Any

1 comments? Okay. Myron.

2 MR. HANSON: You questioned the speed of
3 why this is taking place. And, you know, from a
4 personal perspective and talking to landowners and
5 various individuals out there, it comes down to
6 money and the lease money that these oil companies
7 are paying.

8 You know, the lease money has gone from
9 250 or 300 dollars an acre to -- the last
10 conversation I had with one of our members, he was
11 offered \$2,000 an acre on a three-year lease.
12 Well, if an oil company is paying \$2,000 an acre,
13 they want to drill that lease out before it
14 expires.

15 So now if you spread this across the whole
16 of western North Dakota with these increased
17 bonuses and the need to drill out those leases,
18 they need to get it done because they don't want to
19 spend that money a second time if those leases
20 expire.

21 MR. WARD: You could argue that's the tail
22 wagging the dog, though. It depends on how you
23 want to -- how you -- you could reframe how you do
24 leases. Okay.

25 We'll take a question from over there.

1 MR. MARK BOHRER: I have some comments
2 here. My name is Mark Bohrer. I'm here as a board
3 member of the Ground Water Protection Council.
4 I'll offer some comments that dovetail very nicely
5 with one of the slides Mr. Eberhard had earlier
6 today.

7 The states have regulated oil and gas
8 production for over 80 years, including that part
9 of the drilling process so much in the news today,
10 hydraulic fracturing. While all state agencies
11 have web sites dedicated to providing the public
12 information about what they do, how they do it and
13 how to get more information, what has not existed
14 until recently was a single public site for all
15 states that contained useful information about the
16 process of hydraulic fracturing, chemicals used,
17 groundwater and multistate-related data.

18 There is a new web site out there called
19 FracFocus, a joint venture of the Ground Water
20 Protection Council and the Interstate Oil and Gas
21 Compact Commission, which meets these needs.
22 Launched on April 11, fracfocus.org is a
23 groundbreaking web site that will help the public
24 get immediate answers to questions and concerns
25 related to hydraulic fracturing of oil and gas

1 wells in their community, regardless of where they
2 live. FracFocus, although supported by all states,
3 exists independent from any one state and does not
4 supplant state rules and regulations.

5 Companies will submit information on
6 chemicals used in hydraulic fracturing to
7 fracfocus.org. The information will be reported
8 using a template that describes the location of the
9 individual wells, the API number, fracture date,
10 operator name, well name and number, latitude and
11 longitude, true vertical depth of the well and the
12 total volume of water used in the fracture
13 procedure. Also reported will be the hydraulic
14 fracturing fluid composition, including chemical
15 trade name, supplier, purpose, chemicals used,
16 chemical abstract service number, maximum
17 ingredient concentration, percent by mass, and the
18 maximum ingredient concentration in the hydraulic
19 fracture fluid, also percent by mass.

20 Chemicals that meet the federal legal
21 standard for confidential business information will
22 be reported as such. Before using the site,
23 companies must agree to that standard and request
24 that the suppliers abide by it.

25 FracFocus will also offer the user

1 valuable information about groundwater hydrology
2 and safety, how to get a private water well checked
3 and suggestions on what types of chemicals to test
4 for prior to drilling. There is information about
5 those chemicals most commonly used in hydraulic
6 fracturing, the proportions typically used and some
7 of the federal laws that apply to disclosure.

8 There are also links to the USGS
9 groundwater information, U.S. Department of Energy,
10 U.S. EPA's National Center for Computational
11 Toxicology, Integrated Risk Information System and
12 hydraulic fracturing web sites. It also links to
13 the National Institute of Standards and Technology
14 and the joint OSHA/U.S. EPA Occupational Chemical
15 Database.

16 Although participation is voluntary,
17 within the first week and one-half of going live,
18 fracfocus.org had 31 oil and gas companies signed
19 on to use it and 13 have uploaded fracturing data
20 for 376 wells. The site has been accessed by the
21 public over 15,000 times to date. Based on the
22 level of interest, requests for assistance and
23 encouragement from the state regulatory agencies,
24 we expect that number to increase significantly. A
25 list of participating companies can also be found

1 on the web site itself.

2 The public information portion of the site
3 is dynamic and will be expanded to include more
4 useful information in the weeks and months ahead.

5 We would like to thank the U.S. Department
6 of Energy Office of Fossil Energy for its
7 encouragement and support in building what we hope
8 will become a destination site for citizens
9 interested in or concerned about drilling activity
10 in their community.

11 Those are my comments and I'd be happy to
12 leave those with the Bureau of Land Management.

13 MR. WARD: Yeah. Actually, if you could
14 stay on the microphone because I've got a number of
15 questions and it seems like you're the subject
16 matter expert. So about the disclosure web site,
17 who comprises it, runs it, funds it and what
18 chemicals are disclosed and who decides what should
19 be disclosed and what is the official governing
20 body? You mentioned it in the letter, but I think
21 it needs to be explicit as to --

22 MR. MARK BOHRER: The web site was a
23 collaborative effort between the Ground Water
24 Protection Council and the Interstate --

25 MR. WARD: Which is -- which is?

1 MR. MARK BOHRER: It's made up of member
2 states. They typically involve agencies involved
3 in surface water and/or injection practices.

4 MR. WARD: So Dennis would be a member
5 of --

6 MR. MARK BOHRER: His agency is a member
7 of the Ground Water Protection Council, yes.

8 MR. WARD: Okay.

9 MR. MARK BOHRER: They're -- it's a state
10 regulatory industry -- focus group and, of course,
11 the Interstate Oil and Gas Compact Commission is
12 made up of the oil and gas states. It was a
13 collaborative effort to solve this issue of
14 disclosure and there was a work group of industry
15 representatives that worked together with the
16 Ground Water Protection Council and IOGCC to
17 develop this web site for voluntary disclosure.

18 MR. WARD: And, Lynn, are you a member of
19 the IOGCC, or your agency?

20 MR. HELMS: North Dakota has been a member
21 since 1953. The IOGCC, the members are the
22 governors of the oil- and gas-producing states.

23 MR. WARD: And you work for the governor
24 and so by that --

25 MR. HELMS: Correct.

1 MR. WARD: All right. Okay.

2 MR. MARK BOHRER: And they developed this
3 web site to help solve this issue of chemical
4 disclosure related to hydraulic fracturing.

5 MR. WARD: So is your site capable of
6 managing tens of thousands of wells per year and
7 how much is it going to cost and who's going to pay
8 for it? And who's supposed to do it?

9 MR. MARK BOHRER: The -- there is a
10 contractor who developed the web site and is right
11 now in charge of maintaining it. Initially, it was
12 funded with money from the U.S. Department of
13 Energy. There is ongoing discussions as to what
14 the -- who is going to pay for this maintenance in
15 the long term. There has been some discussion of
16 possibly industry paying for it since it's their
17 data. That has not been decided.

18 Technologically, I think it can handle all
19 the information that is going to be uploaded to it.
20 The contractors that worked on it have developed a
21 database for many of the oil and gas states in the
22 country, so they are very intimate in the knowledge
23 of what goes on in the oil and gas industry, and
24 some of those databases for some of these large
25 states are very large and very complicated.

1 MR. WARD: Okay. And, lastly, how much
2 have you paid these contractors to open up this
3 site and get it going?

4 MR. MARK BOHRER: That, I do not know.

5 MR. WARD: Is it millions, hundreds of
6 thousands?

7 MR. MARK BOHRER: It's not millions and
8 I'd say it's not hundreds of thousands, but I
9 honestly don't know.

10 MR. WARD: So it's not onerous in terms of
11 its costs?

12 MR. MARK BOHRER: No.

13 MR. WARD: Okay. Because I think that's
14 what was implied in that question. That's why I
15 asked.

16 Thank you.

17 MR. MARK BOHRER: You're welcome.

18 MR. WARD: Question from this mike.

19 MR. VERLE REINICKE: Verle Reinicke. I
20 have three questions, if I may, for Donny and also
21 for Myron. What is the bonding level of
22 reclamation processes for wells on the BLM land?

23 MR. NELSON: I believe it's 10,000 per
24 well or -- just a second. I think I've got it
25 right here. Make sure. 10,000 per well, 50,000

1 statewide or 150,000 blanket bond nationwide, which
2 means if you put down 150,000 blanket bond, you can
3 drill as many wells as you want.

4 MR. VERLE REINICKE: Has that been updated
5 since this most recent boom has started?

6 MR. NELSON: I think this was established
7 in 1973, according to this.

8 MR. VERLE REINICKE: Well, I mean does it
9 make sense for those --

10 MR. NELSON: No, it doesn't.

11 MR. VERLE REINICKE: -- to be updated?

12 MR. NELSON: Yeah, it makes sense to be
13 updated. It doesn't make any sense that it hasn't
14 been updated in that --

15 MR. VERLE REINICKE: And who's responsible
16 for doing that?

17 MR. NELSON: Well, I believe that would be
18 BLM.

19 MR. VERLE REINICKE: And, lastly, what
20 happens when the -- to the bonds when the boom dies
21 and what happens to the well?

22 MR. NELSON: Well, if it goes like it has
23 in North Dakota through some of the others, usually
24 the player -- as the wells draw down and they're
25 not producing as much, they get sold off and you --

1 to smaller companies or they'll be basically
2 investor companies, several people getting
3 together.

4 Then you have a problem if they default,
5 then the State -- or excuse me. With BLM, it would
6 be different; right? I'm thinking of the private.
7 Then it would be State that would be liable for it
8 if there's -- if that bond doesn't cover it.

9 MR. VERLE REINICKE: Is that the kind of
10 thing that John was talking about a while ago in
11 terms of passing these off?

12 MR. NELSON: Yes.

13 MR. VERLE REINICKE: Like selling
14 mortgages?

15 (Laughter.)

16 MR. VERLE REINICKE: And is the same
17 problem obtained with selling off these leases as
18 obtains with selling off mortgages? That may not
19 be fair.

20 MR. WARD: There are a couple of questions
21 that have that implication. We should answer that
22 carefully. In other words, does the public end up
23 holding the bag for this development down the line
24 because the companies don't have the money or the
25 bonds aren't sufficient or -- or the contamination

1 is so great?

2 MR. NELSON: Yes. That's what happens if
3 the bonds aren't sufficient is the State or you and
4 I as taxpayers become liable. And I think, Lynn,
5 I'd like him to kind of talk on this a little. I
6 think he has done some research on what -- in the
7 previous booms, I don't think they reclaimed like
8 they should, and we have a lot of what they called
9 temporarily abandoned wells out there that are
10 sitting there that I think -- for many, many years.
11 We have them on our place.

12 In fact, I'm just going to tell a little
13 story is when we had Texaco that was in the Blue
14 Buttes oil field, Amerada Hess at that time, which
15 is now called Hess, took it over and we had to show
16 them the well sites. They didn't even know about
17 them.

18 So, I mean, there's a lot of that
19 potential for the public ending up having to pay
20 for these, and I -- I would hope that this boom
21 with as many wells as is being drilled they would
22 do a better job of it. And I'll let you talk,
23 Lynn.

24 MR. JUDICE: Could I first interject? The
25 bonding amount is \$10,000 per lease on a lease

1 basis, 25,000 for state and 150,000 nationwide.
2 Bonding is an assurance, not insurance. It is a
3 means that the Bureau places an amount that is in
4 good faith that operations would be done in a
5 prudent fashion.

6 We have the ability to raise bond amounts.
7 We frequently do bond reviews. The regulations
8 require that we take a look at the bonds, and those
9 factors include the history of previous violations,
10 the location and depths of the wells, the number --
11 the total number of wells involved by an operator,
12 the age and production capability of the field and
13 any other unique environmental issues.

14 We have frequently raised bond amounts
15 based on those criteria. We take a look at that
16 very intently. But the bond amount is also a means
17 of controlling compliance, if there were issues.
18 For a \$25,000 statewide bond, it may not seem like
19 a lot, but if an operator were to default or they
20 would not comply with the requirements that BLM has
21 asked and we had to reduce that bond amount and
22 attach it to do the work ourselves, that means that
23 every other well that wasn't tied to it no longer
24 is -- has the rights to produce.

25 So an operator does not want to -- at all

1 want to have his bond reduced or adjusted because
2 it has significance. If we were to bond at actual
3 amounts, we'd be looking at, you know, bonding
4 Whiting at, you know, a couple hundred million
5 dollars just to cover actual operations, and that's
6 not the intent of what bonding is.

7 MR. VERLE REINICKE: You make -- I like
8 words, so you made the distinction between
9 insurance and assurance. So there is a level that
10 as it works practically there is some -- there are
11 teeth in this that allow for oversight and
12 regulation?

13 MR. JUDICE: Very much so.

14 MR. VERLE REINICKE: Okay. Thank you.

15 MR. NELSON: I'd like to respond a little
16 bit to that too. Now, a lot of people don't
17 probably understand with a bond, they don't put
18 up -- or a lot of times you don't put up that
19 amount of money on a bond. They go out and
20 basically put up 1 to 2 percent of it and buy --
21 and an insurance is basically -- the insurance does
22 it; right?

23 MR. JUDICE: It's a surety company --

24 MR. NELSON: Mm-hmm.

25 MR. JUDICE: -- that you can purchase --

1 MR. NELSON: So they wouldn't put up 2
2 hundred million. Or they don't even put up
3 usually, you know, 150,000. They can go into an
4 insurance company and only put up probably
5 2 percent if those companies also look at whether
6 they're good actors or bad actors. And that's what
7 you're saying, you can raise them on somebody that
8 you think might be a bad actor; right?

9 MR. JUDICE: If they have those criteria
10 as being -- having previous violations and other
11 issues, we have the ability to raise it. But
12 the -- the bond amount, regardless of its -- a CD,
13 a certificate of deposit, if it's real money or if
14 it's a surety company that posts it, it's still
15 that total amount that is the government's
16 assurance that activities are going to transpire,
17 and that is something for the public's protection.

18 MR. NELSON: But what I'm getting at is a
19 lot of times they'll say, We're putting up all this
20 money as a bond and it's a hardship, when it
21 actually isn't is my point, I guess.

22 MR. WARD: There are a couple of -- more
23 questions for the BLM. And this gets into what
24 your role is. Mule deer have declined
25 significantly in Wyoming. What -- what is BLM

1 doing, if anything, to keep it from happening here?
2 Does BLM get involved in the -- in produced water,
3 particularly if it's spilled all over the surface
4 at concentrations of 200,000 TDS? That would be
5 quite an issue.

6 And BLM, if you -- concerning well
7 inspections by BLM or state departments, resources,
8 if it was designated a high-risk well, what would
9 be the frequency of an on-site well inspection?

10 So sort of three questions. One is around
11 mule deer and wildlife in general and BLM's role
12 there, and how do you get involved in spill
13 operations and cleaning up and then the third is
14 site visits.

15 MR. JUDICE: Each and every well requires
16 an environmental document to be written. And in
17 compliance with the National Environmental Policy
18 Act, we look at all aspects of the environment of
19 what that action would potentially impact. We
20 analyze all of that in a -- in this document, and
21 any mitigating measures are there to -- are
22 necessary to reduce any potential impacts to a
23 nonsignificant status.

24 So we look at -- at all aspects of the
25 environment. It's looked at in this environmental

1 assessment and then decisions are made out of there
2 on how to go about any development so as not to
3 have those -- those impacts occur.

4 We look cumulatively, also, in these
5 documents to recognize that it's just not one well,
6 but it's several wells. So it looks at more of a
7 landscape look at -- at all impacts. So these
8 environmental documents are very valuable to the
9 decision-makers in BLM to -- when they allow these
10 actions to proceed. When --

11 MR. WARD: A related question just on
12 that. Is there a community impact statement
13 relating to the issue of how fast and rapidly
14 things are going in schools and roads, et cetera?
15 Does BLM do anything in terms of community effect?

16 MR. JUDICE: There is no --

17 MR. WARD: No provision for that?

18 MR. JUDICE: No.

19 To speak to spills, anytime there is a
20 spill related to a federal action, we have a
21 process involved that there are requirements in the
22 regulations to notify us within 24 hours and -- on
23 major situations. There is a response team that we
24 have in place here in North Dakota that takes
25 action, and -- and we work closely with the state

1 and local agencies so to -- if there is lands that
2 are affected outside of our jurisdiction.

3 When -- the question about well
4 inspection, the criteria, each and every well
5 that's received a high rating is inspected at least
6 annually, and that goes for the high-end rating
7 that's given for when a well is in a drilling
8 status, if a -- when a well is in production and
9 when a well is abandoned.

10 MR. WARD: And how is that coordinated
11 with the states or how do the states respond to
12 that?

13 MR. JUDICE: We -- we manage those wells
14 on federal lands and -- and the State has their
15 inspection staff also.

16 MR. WARD: So those wells might be
17 inspected twice?

18 MR. HELMS: Those wells will be inspected
19 twice. We feel that it's important for the
20 citizens of North Dakota that regardless of whether
21 those wells are located on federal trust lands, fee
22 lands, state lands, that they should be inspected
23 and held to the standards of the -- the state oil
24 and gas rules. We have to work through the Bureau
25 of Land Management and BIA if there's an

1 enforcement action on trust minerals or some of
2 those cases, but we -- as Donny talked about
3 pushing us, we push them.

4 And we use something called the Risk Based
5 Data Management System. It was developed by the
6 Ground Water Protection Council and used by 30
7 state oil and gas agencies. It allows us to
8 evaluate the risk of any individual well. We think
9 during the drilling phase it's the most risky, and
10 we visit that drilling rig no less than once a
11 week, sometimes twice a week during part of its
12 phase.

13 Saltwater wells are higher risk. Our goal
14 is to visit them monthly. And oil- and
15 gas-producing wells, less risk. We visit them on a
16 bimonthly or quarterly basis. We haven't been able
17 to do the well visits with the number of rigs, but
18 to credit the legislature and the governor, they're
19 going to beef up our staff to where we can get back
20 to that standard of weekly rig visits, monthly
21 saltwater facility visits and at least quarterly
22 producing well visits.

23 MR. WARD: Just in line because there was
24 a question that referenced that, does the severance
25 tax support your department? In other words, does

1 the ramp-up of this oil and gas development also
2 end up paying for your services or is that done
3 separately?

4 MR. HELMS: I guess in an indirect way, it
5 does. We are a general fund agency --

6 MR. WARD: Okay.

7 MR. HELMS: -- so we are not dependent on
8 a mill levy on oil production or gas production or
9 permit fees or anything like that for our funding.
10 We're funded by the citizens of North Dakota, and I
11 think that's a good way to do it.

12 In its wisdom, the State of North Dakota
13 set up a system where permit fees, certain fines
14 and things that we do from enforcement actions go
15 into something called the Abandoned Well
16 Restoration Fund. And so if, for example, the bond
17 is inadequate to cover the plugging and abandonment
18 and there isn't a responsible party that we can go
19 after, there are a few million dollars of moneys
20 sitting in that fund to take care of those
21 problems. So we don't anticipate having to go back
22 to our citizens and ask them to deal with that.

23 MR. WARD: Great. We'll take a question
24 from the right side.

25 MS. ALEXIS DUXBURY: Good evening. My

1 name is Alexis Duxbury, and I'm coming up here to
2 follow up on some earlier questions and statements.

3 There was a lot of discussion -- there's
4 been a lot of discussion on local and state control
5 versus, I'm assuming, federal control, and I wanted
6 to get a few things clarified on that because I
7 think some of our discussions have been pretty far
8 widely ranging.

9 First, I notice that the title of this
10 whole forum is Hydraulic Fracturing on Public
11 Lands. And I want to know right now from the BLM,
12 are you contemplating allowing the state or local
13 authorities to manage the federal lands? Is that
14 part of this discussion?

15 And to the state folks up there, I'm
16 asking you do you really think that you should
17 manage the federal lands?

18 If you're suggesting that, I think I would
19 have a real bone of contention with that because I
20 don't think the state authorities are the same as
21 the federal authorities.

22 So I would appreciate answers from kind of
23 both perspectives.

24 MR. WORDEN: We are not here to -- to see
25 if the states want to regulate the public lands.

1 We -- we are here to get North Dakota's people's
2 opinions of hydraulic fracturing.

3 We continue to regulate the public lands,
4 as I've described them in my presentation. What
5 we're -- we also have is -- since it's oil and gas,
6 is dual jurisdiction over oil and gas regulations
7 where the operators must comply with both sets of
8 regulations.

9 MR. HELMS: I -- I would agree with that
10 and, no, the State of North Dakota is not proposing
11 that it take over management of the federal lands
12 in the state of North Dakota.

13 On the opposite side of that coin,
14 however, is that we are very resistant to increased
15 federal regulation of things like hydraulic
16 fracturing which we have been dealing with, as I
17 said, for decades and believe that we do a good
18 job. We also are extremely accessible, as I can
19 tell you from my e-mail records and my phone
20 records.

21 But we're proud of the record we have and
22 so we're not proposing taking over management of
23 the federal lands. On the other hand, we are
24 adamant that the federal agencies should not take
25 over aspects of oil and gas that we are currently

1 regulating.

2 MR. WARD: Okay. And just a quick
3 question, and this goes back to the whole hydraulic
4 fracturing discussion and this -- and the Ground
5 Water Protection Council. If fracking fluid is so
6 safe, why have the companies been so determined not
7 to tell us what they contain? Proprietary interest
8 says a claim should be overridden by public safety
9 concerns.

10 I guess this goes to Halliburton. Why has
11 it taken so long to come up with this forum and
12 this format?

13 MR. EBERHARD: The -- one of the comments
14 made earlier on -- on disclosure and fluids is,
15 Well, just patent them. Well, the patent process
16 is a very cumbersome process and it takes years to
17 do, and that's -- we're -- everybody's in business.
18 So it's lots easier to just remain -- have
19 something remain proprietary. Just don't let it
20 out if you can.

21 The issue on disclosure, again, for
22 60 years hydraulic fracturing has been used
23 throughout the United States, over -- well over a
24 million frack jobs have been conducted in that time
25 frame. Not once is there a documented occurrence

1 of hydraulic fracturing causing contamination of
2 any aquifer anywhere in the United States. This
3 has been borne out by numerous studies and
4 evaluations.

5 So the concern is why are you disclosing
6 or not disclosing on something that is not a
7 problem? The problem is becoming -- there's a lot
8 of rhetoric, there's a lot of discussions, Well
9 this could happen. That could happen. It hasn't.
10 So there wasn't a need for the disclosure
11 discussion. It's now become one.

12 Again, if there's a spill on surface, the
13 MSDS takes care of everything you need to know
14 about that spill. What are the proper medical
15 procedures? What are the proper protective
16 equipment used to handle that chemical? No
17 different than any other chemical industry in the
18 United States.

19 So the -- the concern has been -- we can't
20 even keep up because it's been -- it's gone from,
21 Well, you're going to contaminate aquifers and the
22 fracks are going to get in there to, Well, now what
23 about a surface spill? There are chemicals -- this
24 is a farming community. There are chemicals out
25 there every day that get hauled around that you

1 really don't want to have where it's not supposed
2 to be dispersed.

3 So it hasn't been an issue, but we're
4 trying the best we can to address public concern.
5 The Ground Water Protection Council, the voluntary
6 disclosure is one way we're doing that. States
7 have always regulated this. If there's ever been
8 an issue, no company has ever said, "We won't tell
9 you what there is." If it's a surface incident or
10 a downhole incident, if somebody comes and says,
11 "We think your well's" -- "my well's contaminated.
12 We need to know what you pumped," that information
13 is readily available. We will tell anybody what
14 they need to know to investigate that.

15 That's not the problem. There's never
16 been a problem with that, and that was the
17 direction that Colorado Oil and Gas took is if
18 there's an incident, then if it's a medical
19 emergency, we have 24-hour hotlines that can be
20 called right now and you can find out what you need
21 to know as a medical professional or as a
22 government representative. So it's not like you
23 can't find it out.

24 The problem is once you put something in
25 public record, then it becomes public record and

1 anybody can, again, spend millions of dollars
2 trying to develop chemistry. The comment was made,
3 Well, if it makes a better well, why don't we give
4 it to everybody? We're in this business to make
5 money, just like everybody else is. So if I have a
6 competitive advantage, it's to my advantage. I can
7 generate more revenue and return shareholder value.
8 That's why we do the -- do the research and such.
9 So it's a protection of that.

10 It's not that -- if something happens,
11 it's not that anybody is sitting here saying, "No,
12 we're not going to let you know what it is." It's
13 just that it gives you the opportunity to go to
14 that operator and say, "I can make a better well
15 than the other guy can." And with that, he'll pay
16 you a little bit more money. And that's what we're
17 in business for.

18 The -- so I guess, again, to answer the
19 question as concisely as I can, because I've
20 rambled here, is if there's an incident, no company
21 out there is going to say, "We won't tell you what
22 there is." But once you put something in public
23 domain, the public Right to Know Act kicks in. So
24 that's where the concern is out there.

25 The Ground Water Protection Council allows

1 you to do disclosure of most everything and if you
2 have a new chemical that you want to hold under a
3 confidential status, you can do that. WD-40® has
4 proprietary chemicals. It's a -- they don't have
5 anything on their can if you ever go look at
6 WD-40®. Coca-Cola®, I mean that's an obvious
7 example.

8 But there has not been any contamination
9 of an aquifer anywhere in the United States as a
10 result of hydraulic fracturing. Oil and gas
11 operations, yes; hydraulic fracturing, no. So --

12 MR. WARD: So in the interest of time,
13 because you are rambling.

14 MR. EBERHARD: It's something I'm very
15 passionate about.

16 MR. WARD: You can tell he's really
17 passionate about it.

18 We'll go to the -- oh, I'm sorry.
19 Appreciate it. Thank you for keeping track.

20 MS. KANDI MOSSETT: Dosha. Hello,
21 friends. My name is Kandi Mossett. I am Mandan,
22 Hidatsa, Arikara. Originally from New Town, now
23 right here in Bismarck. And I'm here speaking on
24 behalf of the Indigenous Environmental Network, as
25 well as the youth that I work with in 34 tribal

1 colleges across the country.

2 And I hear a lot about hydraulic
3 fracturing and the groundwater and everything
4 that's happening underneath and we're so far down
5 that everything's staying underneath the shale, but
6 we don't talk about -- about everything that's
7 happening on the surface, everything that's
8 happening with that truck traffic.

9 We have pictures of trucks driving down
10 the road with their valves open, putting that frack
11 water right onto the highways, and spills, illegal
12 dumping, almost every day, on a daily basis, which
13 I'm sure Fred can attest to and talk about.

14 And I want to know what the fines are, the
15 minimums and maximums to date, that have been
16 ticketed to different companies, both on and off
17 the reservation, for these types of spills and
18 illegal dumping and illegal contamination because
19 we can see with our own eyes, whether or not we're
20 scientists, that this is contaminating the surface.

21 When you see big puddles that go all the
22 way over to a field with hay in it that are also in
23 the same puddle as a fracking oil rig, all the
24 water just mixing together, that hay is going to be
25 fed to cows later on that we're going to eat, cows

1 that we make our living with.

2 When our own tribal police pull over
3 trucks and they can't do anything about it, how is
4 the State going to step in and do something about
5 it? With this truck traffic, we have a surplus in
6 the state of North Dakota of money. We keep
7 hearing about how great the state of North Dakota
8 is doing economically, yet at home on the
9 reservation our roads are crumbling. They're
10 falling apart and people are being literally driven
11 off the roads, like my cousins. My cousin was with
12 her baby and was driven off the road.

13 And so what are the regulations that are
14 happening with that? And I'd like to do both on
15 and off the reservation.

16 MR. WARD: Thank you. So I guess we could
17 start with the BLM and then go to the states. And
18 this comes back to the earlier question about, you
19 know, pace and the onslaught of this activity. And
20 this question came back up, you know, the rush to
21 drill and the need to -- and the need to plan so
22 that -- so that we don't end up with the situations
23 like this and if it's lease cost that is pushing
24 everything, you know, is there a mechanism to
25 change the -- the approach so that we can adjust

1 the social impact and the community impact? I
2 think that's what the question is alluding to and
3 related to.

4 Yep. So, BLM, what is your social role?

5 MR. JUDICE: Okay. I may need some help
6 from Lonny on this, but, in general, actions
7 that -- on trust lands that affect the surface are
8 a joint ownership with the Bureau of Indian
9 Affairs. They're not here to be a party to this
10 discussion, but they play a role in -- on trust
11 lands, especially as it regards to surface impacts.

12 We have a -- we at the BLM have a role on
13 the lease and in lease operations, so we need to
14 become aware of these violations. We would -- we
15 need to work closely with our sister agency, the
16 BIA, to come up with an effective way to handle
17 these kinds of situations. First, it's knowledge
18 that it's happening and -- and we will react with
19 our agency to find the ownership of how to take
20 care of that problem.

21 Lonny is coming to the mike.

22 MR. WARD: While Lonny gets to the mike,
23 it would be good to hear from the states and from
24 Whiting as well. Corporate social responsibility
25 is something every company needs to pay attention

1 to, so that will come to Whiting and also the State
2 needs to think about how boom-and-bust cycles
3 affect communities and, you know, not only roads,
4 but public safety, schools, wastewater. All those
5 have come up. I don't know if we've adequately
6 answered that question yet.

7 So, Lonny, do you want to finish with BLM
8 and then we'll give these guys a chance to think?

9 MR. BAGLEY: We -- we did respond to
10 several spills on the reservation working in
11 cooperation with the BIA. One of them was a spill
12 that occurred where a truckdriver drove off
13 location and got onto the road, Number BIA-14, and
14 basically opened the valve and just dumped the
15 whole truckload right there. And it did spread out
16 across a field area. It actually was salty enough
17 to where it caused the road to thaw out and cause a
18 hazard on that road.

19 We worked with the BIA. We tried to help
20 them or -- basically, more than help. We get out
21 there and work with those operators and try to find
22 a solution to how the operators can better work
23 with those trucking companies and get -- get a
24 better system down so it doesn't happen.

25 The -- the one -- the photos that you sent

1 to us about the truck were documented. It had the
2 valve open. There was a line of about three
3 trucks. Valve was open, just going right down the
4 road. Unfortunately, from the photos and license
5 plates and stuff, there was no way we could
6 determine who that individual was. I think BIA is
7 still looking into it, but it -- that becomes a
8 difficult situation as well.

9 As far as any fines that are associated
10 with that on the reservation, I'm not aware of
11 those as the -- on the levy of fines. And whether
12 or not the State can impose any fines on BIA roads,
13 maybe on the highways -- the state highways, I'm
14 not sure. We have no Department of Transportation
15 person here to answer that. I don't know if you
16 know, Lynn. But that question, I'm not sure what
17 those fines would be. And on the reservation it
18 would be fines levied probably by the BIA and I'm
19 not really sure from my point as to what those
20 might be.

21 MS. KANDI MOSSETT: Have there been fines
22 assessed that you guys are aware of, Fred, both on
23 the reservation and for off the reservation and
24 what was the cost of those fines that have been
25 assessed?

1 MR. BAGLEY: I'm not aware of any.

2 MR. HELMS: You're not aware of any
3 from -- from the Bureau of Land Management?

4 MR. BAGLEY: Right.

5 MR. HELMS: Okay. Let me start with the
6 saltwater hauler. Up until a few months ago, it
7 was a largely unregulated practice or -- or
8 industry. The -- there was a meeting at the
9 Attorney General's Office with some of the
10 saltwater haulers that have been in the state a
11 long time and were concerned that their reputation
12 was being damaged, also with oil and gas division
13 people, Health Department people.

14 And just -- I can't give you an exact
15 date, but a few months ago the Health Department
16 instituted a program to license and bond the
17 saltwater haulers as waste haulers in the state.
18 So they now are subject to that.

19 And so if -- if you catch someone
20 committing an illegal act like this, the Health
21 Department does have some teeth now to revoke their
22 license and to take action against them. That's
23 something new because it just really became
24 apparent to us maybe a year ago that this problem
25 was occurring and there were holes in the

1 regulation in terms of dealing with that.

2 With regards to the spills, we are
3 currently in a complaint process with at least
4 three operators regarding the release of hydraulic
5 fracturing fluids into the environment. I --
6 because we're negotiating between lawyers, much of
7 that information is confidential, but I can tell
8 you that we're able to assess fines of \$12,500 a
9 day. And if there is -- I don't want to say
10 negligence. I'm trying to think of what the other
11 term is -- well, a purposeful violation, if
12 somebody commits it on purpose and they knew
13 better, we can actually bring them up on Class C
14 felony charges. Those three complaints by
15 themselves are -- are approaching \$200,000 fines
16 each. So we take this very seriously and we've
17 kept our attorneys pretty busy the last few months
18 with the oil and gas activity.

19 With regards to, you know, what's the
20 hurry, it's a capitalistic society. It is money.
21 It's being driven by mineral owners who want a well
22 on their land. I do believe that there will be a
23 slowdown once this first pulse of drilling and
24 securing leases occurs.

25 The State had -- at best, would have a

1 very clumsy mechanism of slowing this down and
2 people would be hurt in the process. There would
3 be wells not drilled, people that wouldn't get to
4 take advantage of their mineral ownership, and we
5 don't have a good process for doing that. So
6 capitalism rules.

7 I know two years ago when the legislature
8 was in session oil price was less than \$40 a
9 barrel. The rig count had fallen below 40 and I
10 don't think any of us anticipated what came to our
11 doorstep in 2010. I am proud of the way they've
12 responded, not just with staff from my agency, but
13 with over \$300 million for infra -- infrastructure
14 reconstruction in the western part of the state.

15 On top of that, the State has funded
16 housing studies. It has funded road and traffic
17 studies and become -- gotten very aggressive about
18 the study and the planning process and helping
19 local communities get past this hump. I think the
20 State is going to step in and help with the
21 construction of at least a half a dozen wastewater
22 treatment plants for the cities in the west.

23 So, you know, to -- to the State, the
24 governor's credit and the legislature's credit,
25 nobody could have predicted with where we were at

1 in 2009 what was coming in 2010 and 2011, but
2 they're responding very dramatically at this point.

3 MR. WARD: Thank you.

4 And from the industry's perspective, where
5 does your role and your responsibility begin and
6 end with respect to social responsibility in the
7 community?

8 MR. PANEITZ: Certainly, I have seen
9 firsthand the aspects and results of illegal
10 dumping down leased roads. I mean there's
11 tremendous pressure by those saltwater haulers to
12 turn around and go get the next load. But I can
13 assure you that should we find out who that -- is
14 doing that, they will be reported and they will
15 never work for Whiting again.

16 And as far as the social aspects, I
17 routinely will talk to landowners and mineral
18 owners and it's not always just the wealthy
19 individuals that have tremendous acres of land.
20 It's those single moms and those retired ladies
21 that are dependent upon those monthly checks to
22 come in because -- there was one last -- about two
23 weeks ago and she was dependent upon that monthly
24 check because she had no pension. And I assured
25 her that, yes, we will get her wells back going.

1 We've had a really rough winter, but they are back
2 in operation. She was happy to hear that.

3 MR. FOX: That is one thing that the tribe
4 is really concerned about is the -- one is the
5 truck -- truck traffic and definitely the spilling
6 that has occurred due to the amount of trucks that
7 are hauling the water. Currently right now, the
8 Three Affiliated Tribes is in the process of
9 developing tribal oil and gas environmental codes
10 specifically for these spills.

11 I did visit with Mr. Helms, I believe,
12 last week on -- on the issue and that -- knowing,
13 you know, that the tribe is very concerned about
14 this issue, and we -- we do have a list of all of
15 the operators that are currently -- that have --
16 have been negligent. I know Lynn didn't want to
17 say that, but I will say it, that they are
18 negligent in our reservation that seem to know that
19 the jurisdiction inside our Fort Berthold Indian
20 Reservation boundaries is currently, I guess, in
21 array -- disarray.

22 And right now that is one of the things
23 that the tribal chairman is currently working on,
24 with the jurisdiction of the roads and the truck
25 traffic that is currently being out there. So that

1 is one of the top concerns right now is -- with the
2 tribe right now.

3 MR. WARD: Great. Thank you very much.

4 And we'll have a --

5 MS. KANDI MOSSETT: Oh, I just have to
6 say -- go on public record because you asked from
7 the public what we thought about hydraulic
8 fracturing. And I and the people I represent, the
9 youth, that work on over 700 campuses across this
10 country have said we do not agree or nor will we
11 back up hydraulic fracturing because many of us
12 will be here in 50 years while those that are
13 making the decisions right now might not be.

14 And I just want to leave you with we can,
15 as human beings, live without oil. We absolutely
16 cannot live with contaminated water.

17 And with the truck traffic, I understand
18 the fines and everything like that and money that
19 comes in, economic development. I'm not naive.
20 But is it worth it? Absolutely not.

21 Two years ago my friend who was 23 years
22 old was crushed by one of those trucks, and just a
23 few months ago my 21-year-old friend was killed and
24 had an accident with one of those trucks. Is it
25 worth the human life of even one individual?

1 Absolutely not.

2 And so all of you think about if that was
3 your child out there driving on that road and when
4 you have your child's funeral, you couldn't even
5 have a body, all you could have was a picture,
6 because they were crushed. And you think about the
7 potential of that person and the whole life that
8 they had ahead of them wiped out and not even
9 talked about or looked at because of the bigger
10 picture of money. Think about if it's really worth
11 what we're risking here for our future generations
12 and not think about the next 10 years, but think
13 about in 50 years if you can guarantee that our
14 drinking water and our lands will be safe.

15 Think about that today when you go home
16 and when you think about hydraulic fracturing
17 because we have alternatives. We're just not
18 putting the money into those technologies.

19 Thank you very much.

20 (Applause.)

21 MR. WARD: Question from the right side.

22 MR. JAMES LENNINGTON: Thank you. I just
23 had a question for Mr. Helms on the administrative
24 code. I think it's -- is it 43-02-05? Is that
25 right?

1 MR. HELMS: Yeah. 43-02-03 is the oil and
2 gas code, 05 is underground injection control and
3 02 is subsurface minerals. Yep.

4 MR. JAMES LENNINGTON: So does 02-05 where
5 the definition says it's for enhanced recovery of
6 oil and natural gas, is that the applicable
7 section?

8 MR. HELMS: Are you speaking about water
9 injection for enhanced oil recovery? That would be
10 under 43-02-05. Yes.

11 MR. JAMES LENNINGTON: Okay. So that's
12 where my question comes from. Under the permitting
13 requirements, 43-02-05-04, I think there's a whole
14 long list of requirements for the permits. Are
15 those -- are all those things -- once they're
16 provided by the fracking agency or the fracking
17 company, are those open records?

18 MR. HELMS: The answer to that would be
19 yes. Everything that is provided under that
20 regulation is an open record after six months.
21 There is a confidentiality period in the state of
22 North Dakota for six months. So once that's in our
23 files, six months after the well is spudded, then
24 it becomes an open record.

25 MR. JAMES LENNINGTON: So under item ten,

1 the quantitative analysis from a state-certified
2 laboratory for the representative sample of water
3 to be injected, that's a public record?

4 MR. HELMS: Yes, it is.

5 MR. JAMES LENNINGTON: And then can you
6 describe the detail of that quantitative analysis
7 that's required there?

8 MR. HELMS: There are -- and I should
9 probably punt that to Dennis since what we do is go
10 for the -- I guess, the standard analysis that they
11 run at the state-certified laboratory for cations
12 and anions and heavy metals. Do you want to
13 comment on that as to what that standard
14 quantitative analysis is?

15 MR. FEWLESS: Well, are -- we're talking
16 Class II --

17 MR. HELMS: Yes.

18 MR. FEWLESS: -- wells?

19 MR. HELMS: Class II wells.

20 MR. FEWLESS: And I guess I'm not sure
21 exactly what the requirements are for testing on
22 that. I would have to go to our UIC program to get
23 that information. I don't have that right off the
24 top of my head.

25 MR. JAMES LENNINGTON: Okay. Then the --

1 the concrete that's required, concrete casing for
2 protection around the well, is that -- is that
3 logged ahead of time? Is that provided to the oil
4 and gas division beforehand?

5 MR. HELMS: It is. And that's a good
6 question. The cement that's used is a hydraulic
7 seal around these wellbores. We occasionally
8 collect samples of that and submit them for
9 compressive strength tests, but we generally just
10 require those compressive strength tests to be kept
11 by the operator as part of their records.

12 We require a cement bond log of every well
13 in the state of North Dakota and we're maybe a
14 little bit unusual in that before that well can go
15 into production, we actually have a regulatory
16 person review that cement bond log to make sure
17 that there's adequate cement. If there's not, and
18 in about 8 percent of the cases we find some --
19 something inadequate with regards to the wellbore
20 construction, we will either require an increased
21 level of monitoring or a repair.

22 We also require -- if there's defective
23 casing identified in a well during a workover
24 operation or something like that, that has to be
25 reported to us. And we have assessed fines for

1 people who didn't report it, but defective casing
2 has to be reported and it has to be repaired.

3 MR. JAMES LENNINGTON: And you said that
4 goes -- that's before it goes into production. How
5 about before fracking?

6 MR. HELMS: Yes. Those cement bonds -- in
7 fact, if you came to my office and you walked into
8 Richard Suggs' office, you would be dismayed at the
9 amount of logs sitting around because we have
10 prioritized his work until we can get an
11 engineering tech on staff to help him to review
12 cement bond logs and make sure we have adequate
13 cement before the wells are fracked. So he has
14 been setting the logs aside and not picking log
15 tops or formation tops, which is part of our
16 database as well, and reviewing all of those cement
17 bond logs before the wells are fracked.

18 MR. JAMES LENNINGTON: Okay. And before I
19 sit down, I want to back up to one thing you guys
20 have said. This is in reference to Class II. Is
21 that the disposal wells?

22 MR. HELMS: That particular section is in
23 reference to Class II, which is disposal wells or
24 enhanced recovery injection wells. But we don't
25 require all of those quantitative analyses of every

1 producing well, but we require the same cement and
2 casing practices on those. So part of our
3 discussion is applicable to all wells and part of
4 it just to Class II injection wells.

5 MR. JAMES LENNINGTON: Okay. Because --
6 maybe you're going to have to clarify something for
7 me because it says underground injection of --
8 meaning the subsurface emplacement of fluids for
9 enhanced recovery of oil and natural gas. So I
10 would take that to mean this applies to fracking
11 wells as well.

12 MR. HELMS: Well, let me respond to that.
13 The Energy Policy Act of 2005 clarified that and
14 said no, that does not apply to hydraulic
15 fracturing. That applies to permanent emplacement
16 of fluids in the subsurface, but hydraulic
17 fracturing is exempted from the underground
18 injection control program through the Energy Policy
19 Act of 2005. So we have a separate set of
20 regulations that deal with that, and those are
21 found in 43-02-03.

22 MR. JAMES LENNINGTON: Okay. Thank you.

23 MR. WARD: Over here.

24 AUDIENCE MEMBER: I would like to go back
25 to the question that was submitted earlier about

1 the other industries and the other agencies, the --
2 the Game and Fish and tourism, because it kind of
3 got short-shrifted. And a question, I think, for
4 Lynn Helms and for the BLM both, are you guys
5 talking to the other agencies that are responsible
6 for -- for the other industries in western North
7 Dakota? Do you talk to the state parks and state
8 tourism and Game and Fish and the agricultural
9 commissioner, Lynn? And, BLM, do you talk to the
10 Forest Service about the multiple uses of the
11 grasslands and how you can work with them, you
12 know, to protect things like the Maah Daah Hey
13 Trail or deer hunting on the grasslands and -- and
14 those kinds of things? What's the communication,
15 both at the state level and at the federal level,
16 with those agencies to make sure that the impacts
17 because of this really rapid development are being
18 dealt with, and then -- and should there even be
19 maybe a task force or something that looks at those
20 kinds of things at the state level and --
21 especially the state level because of how quickly
22 things are going?

23 MR. HELMS: Well, thank you for asking
24 that question. And it is never all that it could
25 be, I can assure you that, but I -- I'm happy to

1 respond that Dave Glatt, who is the -- the
2 environmental -- oh, I've forgotten his title now.

3 MR. FEWLESS: Chief of the Environmental
4 Health Section.

5 MR. HELMS: -- Chief of the Environmental
6 Health Section at the Health Department, Terry
7 Steinwand at Game and Fish and myself are planning
8 to meet as soon as the legislative session is over
9 and start discussing the overall impacts of a lot
10 of these aspects. It will be a lot like an
11 environmental assessment, but on a statewide basis
12 because there are some documents that Terry has to
13 get through and take a look at and respond to and
14 he needs our assistance in that.

15 So we try to have quarterly meetings with
16 the Health Department. It ends up being about once
17 a year with Game and Fish and it needs to be more
18 often and more frequent, and I understand that. So
19 that's the extent of our interaction. Hopefully
20 that helps.

21 With regards to BLM, we have monthly
22 contact with the BLM regulators. They come over
23 for all of our monthly hearings and so I get to see
24 Mike Nash and Dan Lopez on a monthly basis, and we
25 sit down and have a discussion about what's

1 happening in each other's world.

2 The really tough problem and the one that
3 Kandi brought up is that jurisdictional issue at
4 that exterior boundary of the reservation where
5 police powers and regulatory powers and stuff just
6 don't mesh, and we need an agreement there in order
7 to make that work better.

8 My guys quite often -- and I've even
9 reached out to the FBI and always make an attempt
10 to meet the new FBI agents when they move into the
11 state so that we have a go-to person. If we see
12 some type of illegal activity on the reservation
13 lands, my field inspectors have a contact person
14 that they can report that to so that we can
15 hopefully get it taken care of in a timely basis.

16 Lonny had a comment.

17 MR. BAGLEY: In regards to the Forest
18 Service, when the APD comes in, the surface use
19 plan is peeled off from our review and given to the
20 Forest Service for their review. There is an
21 entire comment period that they go through as well.

22 And on wells that are -- where we have BLM
23 surface or split estate, our wildlife biologist in
24 our office coordinates with not only the North
25 Dakota Game and Fish, but also Fish & Wildlife

1 Service. So we get a full gamut of what the
2 impacts are going to be and what actions we need to
3 impose on the operator's condition of approval to
4 either protect a special species or endangered
5 species or even just in issues where Fish &
6 Wildlife Service has grassland easements, we work
7 with them to try to locate the well away from those
8 easements, if possible, and to better-off what
9 those needs are as well.

10 So we do a lot of coordination with the
11 Forest Service and the state agencies.

12 MR. WARD: We have a lot of people in the
13 queue and we're running short on time, so I'm going
14 to ask you to make your comments quickly and we'll
15 just go back and forth. I'm not sure who's up.

16 Oh, go ahead.

17 MS. THEODORA BIRD BEAR: Yes. My name is
18 Theodora Bird Bear. I'm from Mandaree.

19 I just had a couple comments. I wanted to
20 say that Petro-Hunt's spill of oil and thousands,
21 if not millions, of gallons of saltwater into Lake
22 Sakakawea affected our drinking water. We have
23 three water intake systems; that that water was
24 north of Keene and that water flowed down to us and
25 moved out. Some toddlers on Fort Berthold drank

1 that water. Some elders drank that water. So that
2 does impact us directly. We are directly impacted.
3 And I'm sure that saltwater probably contained
4 frack water as well. So they drank that spilled
5 wastewater. That's my comment about that.

6 The second comment is in regards to the
7 BIA programmatic environmental assessment for oil
8 and gas on Fort Berthold and I believe that has to
9 do with fracking. It's related to fracking.
10 That's a federal -- the BIA is a federal agency and
11 so is BLM, and under NEPA the public has the right
12 to have access to the programmatic documents.
13 There is a 30-day comment period which started on
14 Monday. The five-day public hearings ends three
15 days before the end of the comment period.

16 I and another individual, a tribal member,
17 have both contacted the -- they're called TEC.
18 They're an agency -- a company or something that
19 represents the EPA. They -- I asked -- we both
20 asked for the programmatic agreement. They've only
21 sent us the public notice and a map and a list --
22 schedule of the hearings, which we already have.
23 They did not provide the programmatic agreement,
24 and I believe they -- that is not in compliance
25 with NEPA. So we don't have time to prepare

1 comments.

2 If there's -- I noticed also in that
3 public -- the public scoping notice, there was no
4 indication at all that any of the documents would
5 be released to the public. I'm sure that BLM is a
6 part of that process and I want BLM to know that.

7 Thank you.

8 MR. WARD: Okay.

9 AUDIENCE MEMBER: I don't really have a
10 question. I have more of a comment. I appreciate,
11 first, the opportunity to speak here as a citizen,
12 as a resident of North Dakota, and to be heard.

13 I thank Don Nelson very much for
14 succinctly stating what I could not have said, but
15 which you spoke for me. I appreciate that. You
16 included factors that -- that were a concern, like
17 water consumption, disclosure and regulation.

18 At present it seems that -- hopefully it
19 will change if it's true, that the state regulatory
20 commission seems to need a little pushing to act,
21 and that would make it appear more like it's
22 representing oil industry versus North Dakota
23 residents.

24 Paraphrasing Mr. Nelson again, he did say,
25 as several other people have said, let's slow down.

1 I'm a mother and a grandmother. I'd like to leave
2 a legacy to my children and their children and
3 their children that we can be proud of to give
4 them.

5 Somebody mentioned the harsh conditions,
6 excuse me, on the reservation and somebody else
7 said, Well, you know, capitalism, and I understand
8 that. I live here. But we mentioned a couple of
9 other words tonight. We mentioned integrity of
10 wells. I'd like to apply that integrity to each of
11 us, to each of our companies.

12 (Applause.)

13 AUDIENCE MEMBER: And the other word I'd
14 like to add and maybe it was said, but
15 accountability. It can't be all about capitalism.
16 I mean I hope to God that it's more than that. We
17 are one country.

18 I agree with another speaker. If
19 everything is as good as you all are saying it is,
20 what the heck do we have to be afraid of? I
21 don't -- I don't get that.

22 And I guess I'd like to urge everybody
23 else -- I'm not involved in any particular way.
24 Just as I said, I'm here representing myself, but I
25 know that it's a big topic and that the residents

1 of North Dakota all need to get involved and do
2 some homework of their own and get the information
3 they need to be knowledgeable.

4 And thank you very much.

5 MR. WARD: Thank you.

6 MS. LISA OMLID: My name is Lisa Omlid.
7 I'm a resident of Bismarck. I'm here with a
8 comment and a question.

9 First, I urge the Bureau of Land
10 Management to require the broadest possible
11 disclosure of the chemicals used in hydraulic
12 fracturing. While some of the substances involved
13 in fracking are edible, such as citric acid, others
14 are dangerous, corrosive and even carcinogenic.

15 We, the public, are currently prevented
16 from knowing the exact composition of fracking
17 fluids under the guise of trade secrets.

18 In the past, it's worth noting that other
19 industries have used the trade secret shield in
20 order to escape revealing their full use of
21 asbestos, dioxin and the myriad of chemicals used
22 in the past and currently included in cigarettes.
23 Where there's a lot of money to be made, there's a
24 big incentive to at least hide and to at most lie.

25 My question is directed to those of you

1 involved in the industry. How can we trust you?
2 How can we trust you to regulate yourself and not
3 lie to us?

4 (Applause.)

5 MR. EBERHARD: Well, that's an awful
6 loaded question. The facts are the facts. The
7 science is out there. The EPA's studying it again.
8 I don't know what else to say. There -- the
9 history -- everything, the science, everything
10 supports this industry stance. So I don't know how
11 to quell those fears. There's always going to be
12 concern. Everybody has concern.

13 I guess, you know, I'm a -- I love to
14 fish. I love to hunt. I love the outdoors. I
15 grew up in Montana. I love everything you guys
16 love. It's not -- so I don't know how to belay
17 your fears, I really don't, if there was some way
18 of doing it.

19 The -- again, the act of hydraulic
20 fracturing, and most of -- all of this discussion
21 today has nothing to do with hydraulic fracturing.
22 That's an act. That's a function that's very short
23 term on the well life. The spills on surface, all
24 this stuff is not a function of hydraulic
25 fracturing. The chemicals that are used do not

1 contaminate aquifers. They're not injected into
2 aquifers. The oil and gas operations have issues,
3 possibly, in some areas, but it's not the act of
4 hydraulic fracturing.

5 So the -- we're -- that's why I don't know
6 how to answer your question. The truth, the
7 integrity, I feel I work for a very reputable
8 company. The -- the press has a way of turning
9 things around. You've heard about the exemption,
10 the Halliburton loophole they call it. That had
11 nothing to do with Halliburton. That was in
12 effect -- in 1984 was when the first rule was put
13 into effect under Bill Clinton and it had nothing
14 to do with us.

15 So the -- the -- I don't know how to -- I
16 really don't know how to answer your question other
17 than we live here, we breathe here, we eat here.
18 If I felt I was doing something that was destroying
19 the environment, believe me, I would not do it.

20 I have as much integrity as anybody in
21 this room. I have kids. I have grandparents. I
22 want them to have the same rights, the same
23 abilities, the same freedoms as anybody else in
24 this room. I want them to have the same future as
25 anybody else in this room.

1 So when you ask me, I don't know what to
2 say, other than I can tell you the science is
3 behind us, the facts are behind us, the truth is
4 behind us and I'm as -- I've got as much integrity
5 as anybody else in this room.

6 (Applause.)

7 MR. WARD: I think there's a common
8 conflation. Hydraulic fracturing has created this
9 revolution. Without hydraulic fracturing there
10 would be no development up here. So it's created.
11 And so in the public's minds, hydraulic fracturing
12 is parallel to all the social impacts, the roads,
13 everything gets balled up into hydraulic
14 fracturing. You speak to an industry person, they
15 think about something that occurs over a period of
16 hours; at most, days.

17 And so I guess we just have to appreciate
18 each other's views and honor each other's views and
19 respect each other's views and understand that
20 sometimes we talk like this. Okay.

21 Next.

22 AUDIENCE MEMBER: Thank you. So I just
23 want to point out that the BLM is my land. It's
24 all of our land. My taxes pay you to host this
25 forum and manage my land. BLM is public land.

1 So I don't think it's irrational to be
2 concerned about what is being pumped under, stored
3 on or trucked across my land.

4 (Applause.)

5 AUDIENCE MEMBER: So while fracking is
6 one -- one thing, chemicals are quite another, and
7 so I think it's very responsible, actually, for us
8 to be asking questions about what the chemicals
9 are, not the process, but what's going in.

10 So my question is directed to Mike
11 Eberhard. If you claim that, you know, there's
12 no -- there's no contamination of soil or of air or
13 of water, how can anyone prove that anything has
14 been contaminated if you refuse to tell us what's
15 in hydraulic fracturing fluid?

16 (Applause.)

17 MR. EBERHARD: Well, for one thing, the
18 air and -- I mean, again, as Richard just pointed
19 out, if you want to talk about the oil industry as
20 a whole, that's a whole different operation. Has
21 there been discharge of fluids on surface? Yes.
22 Produced water, flowback water, there's a lot of
23 things. The act of hydraulic fracturing is not one
24 of them.

25 The disclosure. If you have an issue, if

1 you think that there is a problem and you want to
2 do testing, we'll be more than happy to tell you if
3 we inject -- if we were on the well that was --
4 that we did the frack job and the operator has
5 agreed to it, we'll be more than happy to tell you
6 anything to look for in that water. And we've done
7 that. And never once has there ever been any
8 component of anything we've pumped showed up in a
9 water well. So it's not that we won't do it.

10 It's --

11 And the disclosure, you can go to -- when
12 we say proprietary, maybe 2 percent of the
13 chemicals are proprietary. You can go to our web
14 site, the voluntary disclosure, you can go and log
15 on to halliburton.com and type on an MSDS and it
16 will show you the gas number, the chemical and
17 everything you need to know about that. It's all
18 out there. There are only a few things. It's --
19 it's minimal the number of things that we hold
20 under CBI status. Wyoming has a process and we
21 initiate it and everything that we do in Wyoming, I
22 know of five chemicals that have CBI status for one
23 component in that chemical.

24 It's not -- there's not -- it's not this
25 veil of secrecy that we're trying to hide behind.

1 Keep in mind also that these chemicals --
2 Halliburton doesn't manufacture chemicals.
3 Somebody else makes them. So there's a process --
4 all this stuff has to be -- is well regulated. No
5 different than hauling any kind of other chemicals
6 across interstates or anywhere else. It's all
7 there.

8 And if there's an issue with contamination
9 of a water well, of -- of an incident on surface
10 where somebody needs to know, again, it's there.
11 We'll let you know. We're not trying to hide --
12 we're not -- we're not trying to -- what's the best
13 way to put it? We're -- we're trying to be good
14 neighbors, but we still have to protect business to
15 some degree. So if there's an incident, we'll help
16 you all we can.

17 We've done water testing. We've looked
18 for stuff. Independent labs. We'll send them
19 samples of what was used so you can validate across
20 them. And the thing is is that most of the time
21 it's not the -- it's nothing that has to do with
22 what went on downhole. It's some more shallower
23 event that's going on that had nothing to do with
24 what we did, so -- I mean we're there to help you,
25 but --

1 AUDIENCE MEMBER: Can I just ask a
2 follow-up question? Thank you.

3 So are you saying that you -- you -- as a
4 private corporation, your proprietary interests can
5 single-handedly upend a basic of American value,
6 which is government transparency for public good?

7 MR. EBERHARD: We're not the only ones
8 that have it. Like I say, WD-40® is proprietary,
9 and I know people that use it on their arthritis.
10 They use it for fishing lures out in Sakakawea,
11 spray it on there.

12 AUDIENCE MEMBER: So you're comparing
13 hydraulic fracturing affluent with WD-40®?

14 MR. EBERHARD: Would that be affluent? I
15 mean flow --

16 AUDIENCE MEMBER: For frack fluid or frack
17 chemicals or frack water, produced water, drilling
18 mud, whatever you want to call it.

19 MR. EBERHARD: Well, they're all separate.

20 AUDIENCE MEMBER: Are you comparing any of
21 those to WD-40®?

22 MR. EBERHARD: I don't know of anybody
23 that puts any of them on their wrist, but --

24 AUDIENCE MEMBER: Precisely.

25 MR. EBERHARD: WD-40®, tell me what's in

1 it. No, I'm not. I'm saying that a small
2 component of all the stuff you see is what we call
3 proprietary. It's very limited.

4 AUDIENCE MEMBER: So smaller means not as
5 dangerous?

6 MR. EBERHARD: I already said earlier
7 today anything we come out with that's new is
8 better for the environment than what we had before.
9 Dangerous; you define dangerous. What is
10 dangerous?

11 AUDIENCE MEMBER: Well --

12 MR. EBERHARD: You can't drink Windex®. I
13 mean, again, we can -- you can go around into
14 circles into circles and you define dangerous,
15 define green, define edible. There's a million
16 ways -- carcinogen, I heard the word carcinogen
17 today. I've seen the list of 682 chemicals that
18 Theo Colborn came out with. Do you know what one
19 of those carcinogens is? Sand.

20 But on the MSDS you have to report
21 silicosis and it's a possible carcinogen. That's
22 sand. So this is what's going on. People -- I
23 don't want to -- I'm going to be careful how I say
24 this. I can take any bit of information and make
25 it sound about as bad as you want it to sound. My

1 point is it's not -- we have people that work
2 around this stuff and I think -- it's not -- people
3 are thinking this toxic stuff is brewed up in the
4 back room and, boy, I mean this stuff will melt
5 through the earth if we really don't know what it's
6 doing.

7 That's not the case at all. Most of this
8 stuff comes from the -- the regular industry. We
9 just adapt it. Soaps, biocides, friction reducers,
10 all this stuff. Friction reducers, polyacrylamide
11 farmers put on their -- poly -- on their fields to
12 help water percolation. But the way you put it
13 together, you don't want somebody else to know that
14 because we can take the polyacrylamide and do
15 something a little bit different to it. It's no
16 different than what you're putting on land, but I
17 don't want the other guy to know what I did to
18 tweak that.

19 So I'm not -- it's not toxic stuff. This
20 is stuff that, man, other than acids or the --
21 there's not very many things I wouldn't even just
22 put on my hands because it's just not -- and I
23 don't know how to belay the fears, again, because
24 it's not -- I've worked with this stuff for years.
25 I usually never even used PPE when I used it and

1 I'd be out there testing this stuff with my hands
2 because it's not that bad.

3 It's just there's this -- there's a
4 perception and there's people that want to make
5 money -- you want to talk about following the
6 dollars. There's people that really want to make
7 money off of, "We need to investigate this." And
8 you can perpetuate that analysis forever. We've
9 done it, we've done it, we've done it and we're
10 doing it again, so --

11 I've been very long. I'm sorry.

12 MR. WARD: Yeah. Thank you.

13 One thing to keep in mind is it's not a
14 chemical process. It's a physical process. The
15 chemistry is just trying to make the physical
16 aspect. It's about pressuring up above the frack
17 gradient. I mean acid jobs, that's a chemical
18 process and we don't scream about them. And I'm
19 with you. I mean I'm in sustainability. I'm an
20 environmentalist to the core.

21 MR. KELVIN HULLET: Good evening. My name
22 is Kelvin Hullet. I'm president of the
23 Bismarck-Mandan Chamber, and just a few comments
24 based on some of the conversation tonight.

25 First of all, you know, our organization

1 supports the responsible development of all of our
2 natural resources here in North Dakota, from oil to
3 coal to natural gas to our renewables, and we've
4 seen our energy companies in the state being
5 fiscally responsible.

6 When we go back to the global perspective,
7 you know, we spent an hour and a half today with
8 Senator Conrad talking about the federal deficit
9 and the debt. And if you want to stay up late at
10 night and get into detail on that conversation and,
11 quite frankly, it will about scare you to death on
12 where we're at fiscally in this country.

13 And a piece of what we discussed today was
14 that as we look at our state in relation to what's
15 happening nationally, we're going to see declining
16 resources. North Dakota traditionally has received
17 about 25 percent of its income from the federal
18 government, and that's going to change. And when
19 we look at other states and where they're at today,
20 one of the advantages that we've had in the state
21 is that we've been fiscally responsible. We've
22 also taken advantage of, I think, the responsible
23 way of the resources that we have. And as we look
24 to the future of our country, we think that we're
25 going to have to continue to do that to make sure

1 that our -- our economy and our country remains
2 viable.

3 I would note that there has been a good
4 partnership between the state and the local
5 entities and I think in relationship to this
6 conversation as we look to the future, there's
7 going to have to be a solid relationship with the
8 federal level as well, be it the BLM or EPA or
9 whoever that is.

10 But, you know, if we look at the state
11 level, our legislators at this session, and Lynn
12 had kind of alluded to it, we just passed a DOT
13 budget that was \$1.7 billion. That's the largest
14 DOT budget ever and 500 million of that will go to
15 western North Dakota. When you put in the federal
16 assistance on that, it's about a billion dollars
17 over in western North Dakota for infrastructure.
18 And that, you know -- and that's going to cover a
19 variety of things, and the State is even looking at
20 how do they loan the Northwest Area Water Supply
21 \$100 million to build a new water supply.

22 So I think there has been a good
23 partnership between the state and the local level
24 and we would hope that those sorts of things would
25 also occur at the national level.

1 And the last part I would add on to that
2 is that as we think about, you know, the economic
3 impact and where we're at as a state, we are in
4 such a unique position. When I talk to my friends
5 in Detroit and other places and they're bulldozing
6 infrastructure and turning infrastructure back to
7 farmland because they can't support it anymore.
8 And here we're trying to figure out how do we fund
9 housing and create space so that we can have a
10 viable economy. And that's a great problem to have
11 and one that we would much rather work on than the
12 alternative.

13 And so those are just a few thoughts that
14 we had. You know, as we look at the industry, we
15 see about 25,000 jobs have been created, the
16 economic impact is \$12 billion, and that's a pretty
17 tremendous impact in a state with 670,000 people.

18 The last thing I guess I would note and
19 I'll take my chamber hat off for a minute and move
20 over as a parent. You know, it's quite apparent
21 that at least for the next 40 or 50 years we're
22 going to have an oil-based economy. I have a
23 20-year-old United States Marine in a foreign
24 country, and if I have to make a decision between
25 am I going to develop an oil industry in North

1 Dakota and pay a farmer for that oil or am I going
2 to buy it from a foreign country who isn't
3 necessarily friendly to the ideals and ideas of the
4 United States, I'll take the North Dakota farmer
5 any day.

6 So thank you very much.

7 (Applause.)

8 MR. DAVID HYNEK: Good evening. My name
9 is David Hynek. I'm a landowner, I'm a farmer and
10 I'm a rancher from Mountrail County, right in the
11 heart of the Bakken.

12 My brother and I farm the land that has
13 been in our family since the early 1900s. We're
14 currently working the fifth generation into that
15 farming operation. The soil and the water are our
16 lifeblood.

17 I also happen to serve as a county
18 commissioner in Mountrail County, have for about
19 11 years, so I am, on a daily basis, intimately
20 involved with the oil industry. I also own
21 minerals and receive a royalty payment.

22 On the land that I own I have five water
23 wells that are currently in areas where there is
24 production. Those oil wells have been there, some
25 of them, for going on four years. They're all

1 producing, have all been fractured. I tested
2 that -- those water wells prior to the drilling
3 companies coming in. I tested those water wells
4 six months or a little later after they've been in
5 production. I have encountered absolutely no
6 problem with any of my water. One of those wells
7 is our drinking water and it provides water for our
8 house. The other wells provide water for our
9 livestock.

10 As far as I'm concerned, hydraulic
11 fracturing has absolutely no impact on the water on
12 my property, the groundwater, and I am not aware of
13 any incident in Mountrail County where that is also
14 not true. And we have approximately 900-plus wells
15 currently in Mountrail County and I would
16 definitely know if there is a problem.

17 Thank you very much.

18 MR. WARD: Thank you.

19 MR. PETERSON: Thank you. Andy Peterson,
20 North Dakota Chamber of Commerce. One of the
21 questions that was raised tonight by the BLM is do
22 we want this industry here in our state? Well, on
23 behalf of thousands of North Dakota businesses, I
24 want to say yes, we want those -- this industry in
25 our state.

1 Secondly, are there some challenges?

2 Absolutely. We probably have challenges like any
3 other state that has a developing industry. Do we
4 need to address those in a responsible way? Yes.

5 You asked a question about corporate
6 social responsibility. Let me just say on behalf
7 of business we often overlook every single day the
8 benefits that businesses bring. That's thousands
9 of jobs to millions of families around the country,
10 and we should be thankful to business and industry
11 for doing that.

12 MR. WARD: So Mitchell would maybe go down
13 in history as the hero.

14 MR. RON NESS: Thank you. Ron Ness with
15 the North Dakota Petroleum Council.

16 First of all, I want to commend all of you
17 tonight. We've all been here a grueling five-plus
18 hours and for those of you from Denver, we're long
19 overdue for dinner. But you guys have -- you have
20 given the crowd great latitude. You have -- you
21 came here to talk about hydraulic fracturing. You
22 essentially have let them talk about anything they
23 wanted to talk about, and our panelists have done a
24 great job presenting and responding to each of
25 those questions.

1 And I think, you know, in summary, what I
2 have heard very clearly is that I didn't hear
3 anyone on the panel, and I really haven't heard
4 anyone in the audience, say that the federal
5 government can do a better job of regulating
6 hydraulic fracturing in the state, and specifically
7 in the state of North Dakota we take that very
8 seriously. North Dakota is a very unique state in
9 how we regulate the oil and gas industry. The oil
10 and gas industry is likely the most regulated
11 industry in the world.

12 Certainly, there are issues and our state
13 will address issues and we will see rules,
14 legislation, and industry will step forward. But
15 in North Dakota we put that responsibility in the
16 hands of our highest elected officials, our
17 governor, our Attorney General and our ag
18 commissioner as part of the Industrial Commission.
19 They are our regulators of the oil and gas industry
20 in North Dakota. So we take it very -- very
21 seriously. We've got a long history of doing it
22 right here.

23 Certainly, this has gotten to be a big
24 industry in North Dakota. There are a lot of
25 things going on; but at the end of the day, we are

1 doing things right. There are slips and mishaps
2 and things that happen all the time in every
3 industry. In our industry they're instantly
4 front-page news.

5 A lot of the discussion about hydraulic
6 fracturing is resonated on the East Coast amongst
7 people who are anti-fossil fuel. There's been a
8 lot of fear mongering going on, but at the end of
9 the day there still have been over a million wells
10 that have been fractured throughout the United
11 States with not one instance of a problem of
12 contaminating groundwater.

13 And even if there would be one instance,
14 and there may be someday, it's not something that
15 as a regulated community we can't control. We
16 certainly have those things happen in groundwater
17 with other industries regularly. You can properly
18 environmentally take care of those things that do
19 occur, and things are going to happen. It's a
20 commercial business.

21 But by and large -- you know, we've held
22 about 25 of these town hall meetings across western
23 North Dakota in the past five years. People are
24 very intrigued by the Bakken, but what we really
25 found out is that they want to know what's going

1 on. They want to understand the technology.

2 And when you go out to western North
3 Dakota, it's a renaissance. I'm a small town North
4 Dakota kid. Isn't it great that we've got a place
5 to bring kids back to the farms and have jobs for
6 kids to come? I've got a nephew graduating from
7 the University of Iowa this spring. Can't find a
8 job interview anywhere. Uncle Ron's going to be
9 able to find him a job right here in North Dakota.
10 Who would have dreamt that that would have ever
11 happened? It's putting kids back in our schools.

12 Yep, we've got a lot of challenges, but
13 Governor Dalrymple has put a billion-dollar stake
14 in the ground for western North Dakota. I think
15 that was a tremendous benefit for the people of
16 western North Dakota because they have to come out
17 of this ahead.

18 Industry is working hard on safety issues
19 or forming committees to address these issues. The
20 State's going to be there to push us where we need
21 to be pushed. We're also responding on our own.

22 So, in essence, you know, I don't know
23 what the BLM is trying to accomplish with these
24 hearings, what they would do with this data, but I
25 think very clearly what I've heard tonight is that

1 the State of North Dakota is doing just fine in
2 regulating hydraulic fracturing and we'd like you
3 to take that message back to Washington.

4 Thank you.

5 MR. WARD: Okay. Thank you.

6 Last -- last perspective.

7 MS. ALEXIS DUXBURY: Yes. My name's
8 Alexis Duxbury. I was up speaking once before.

9 I have some questions and I'd like to make
10 a little statement here, and it's in response to
11 the person that was speaking immediately before me.

12 And that is given that the topic is
13 hydraulic fracturing on public lands, I would like
14 to say I would like the BLM and the federal
15 agencies to step up even more to see that those
16 lands are managed in a responsible and
17 environmentally sustainable basis.

18 (Applause.)

19 MR. WARD: Thank you.

20 Yeah. I think it's fair that we've had --
21 had a divergent conversation that has embraced all
22 perspectives. We're going to take this
23 conversation back. We're going to hear from the
24 people from Arkansas and Colorado. This is a major
25 game changer and it merits our attention. And I

1 think the BLM is being responsible in their role
2 in -- in looking at how things are progressing.

3 Clearly, when we talked about hydraulic
4 fracturing, there was a thought that we were
5 talking about a process. I actually showed the
6 process. When we go into the public and as an
7 industry I think -- and as a regulatory body, we
8 have to recognize that this is a new technology
9 unleashed by Mitchell in the Barnett, and it's
10 sweeping across the country, that has got other
11 consequences, other unintended consequences, and we
12 heard about that as well. Positive consequences in
13 terms of the economy, negative -- potentially
14 negative consequences if we don't get our planning
15 right and if we don't have -- have forethought and
16 foresight, and that's what this panel is
17 responsible for from a civil society's perspective,
18 from an industry's perspective and from a
19 government's perspective, and it's what your
20 responsibility is in a democratic society,
21 foresight and forethought.

22 And so with that, I guess we'll close, and
23 thank you very much for your attention and your
24 endurance.

25 (Concluded at 9:24 p.m., the same day.)

1 CERTIFICATE OF COURT REPORTER

2
3 I, Stephanie A. Smith, a Registered
4 Professional Reporter,

5 DO HEREBY CERTIFY that I recorded in
6 shorthand the foregoing proceedings had and made of
7 record at the time and place hereinbefore
8 indicated.

9 I DO HEREBY FURTHER CERTIFY that the
10 foregoing typewritten pages contain an accurate
11 transcript of my shorthand notes then and there
12 taken.

13 Dated at Bismarck, North Dakota, this 29th
14 day of April, 2010.

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17 -----
18 Stephanie A. Smith
19 Registered Professional Reporter
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